

VCU MAGAZINE



SUMMER 1976



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Cover: American
ingenuity has given us
the convenient, dis-
posable pop-top can.
Now shiny tabs litter the
earth. The tabs seem to
be everywhere, leaving
one to ponder whether
they may one day litter
the surface of the moon.
Illustration by Britt Collins.

Past, present and future

Last August Virginia Commonwealth University was designated a Bicentennial university by the American Revolution Bicentennial Administration. The designation recognizes VCU's participation in this nation's observance of its two-hundredth anniversary. In order to qualify, VCU had to plan courses and activities in three areas: heritage, horizon, and festival.

Eighteen courses, from "Bicentennial Quiltmaking" to "Alternate Futures and Urban America," have been or are being offered during 1975-76. Although most of the courses have focused on the nation's past, present, and future, Richmond and Virginia are the subject of a series of one-week courses currently being offered by the Summer School. Topics being discussed include "Antebellum Richmond," "Richmond Writers," "Richmond in the Revolution," "Revolutionary Virginians," and "The Tidal James." The first of the seven minicourses began May 17 and the last one will start August 2.

Not all of the courses, however, have been confined to the classroom. One course, "Virginia and the American Revolution," was offered over radio. WRFK/FM in Richmond broadcast the fifteen-minute lectures twice daily for fifteen weeks earlier this year.

Among the bicentennial festivities planned is a summer production of *West Side Story*. Six free performances of the popular musical will be staged out of doors in Shafer Court on VCU's academic campus June 14-16 and 18-20. *West Side Story*, a modern-day version of the *Romeo and Juliet* tragedy, deals with family life and ethnic isolation in an urban setting. According to VCU Bicentennial Committee chairman, Dr. Thomas Hall, the musical "reminds us that prejudice does not have a proper place among the principles that led to the founding and development of our nation."

While it is almost impossible to

list all of the bicentennial activities involving VCU or its personnel, one of the more notable programs is the biweekly American Issues Forum, being sponsored locally, in part, by VCU. There also are at least three traveling exhibitions from the Smithsonian Institution which will be displayed on campus in coming months.

Two articles in this issue of *VCU Magazine* were inspired by the university's Bicentennial offerings: "Bicentennial America: A National Inventory," by Drs. Kopf and Schwarz, takes a look at our nation's heritage, while "Why Study the Future," by Ms. Christensen, looks ahead toward our third century. "Bucky Fuller Is a Verb," by senior Buz Grossberg, discusses the visions of one of the world's foremost futurists, R. Buckminster Fuller. "Doctors Still Make House Calls in Blackstone" takes a look at the training of family doctors, physicians who one day may treat you or members of your family.

Also in this issue are illustrations by students in VCU's Department of Communication Arts and Design. The illustrators, all seniors, were students in the advanced illustration class taught last semester by Charles B. Scalini, assistant professor of communication arts and design.

—GBR

Bicentennial America: a national inventory

By Edward J. Kopf and Philip J. Schwarz

One of the first celebrations of this Bicentennial era occurred in Boston in December of 1973. Local patriots, dressed in Indian garb like that of their forebears, reenacted the renowned Boston Tea Party on its highly publicized two hundredth anniversary. They were fully sanctioned by the American Revolution Bicentennial Administration. Yet, within hours this seemingly laudatory act was repudiated by a crowd of other Bostonians. They were not latter-day Tories bent on rejecting the Revolution which the first Tea Party had accelerated, but a new group of rebels—the People's Bicentennial Commission—determined to breathe new life into the old Revolution. They repudiated the costume party reenactment of the Tea Party by staging their own updated version. For this suitably rowdy group oil barrels replaced tea, and Exxon supplanted George III. Economic, rather than political, tyranny was their contemporary target.

Whatever political opinions a historian might hold, this vibrant, audacious, and slightly rebellious scene suggested that the Bicentennial might be something more than the pious, decade-long, national masquerade which the rather dull official celebration seemed to herald. Perhaps, it seemed, a little of the spirit of Sam Adams would be raised along with his breeches. Any such hope was largely vain. Adams, Paine, and Henry themselves, for all their fervor, could not have withstood the avalanche of Bicentennial commercialism which has buried the People's Bicentennial

Commission along with the rest of us. (Perhaps Boston Harbor could best be treated to a Kitsch Party this year with star-spangled underwear and red-white-and-blue beer cans dumped to a murky fate.)

These distressing facts (reiterated again and again in hollow ceremonies) led us, as historians and members of the VCU Department of History, to wonder if there were no way for us to combat the massive trivialization of our heritage. Could not a forum still be created in which serious people could try to strip away the electroplated gilding and search for the Bicentennial's core (if there was one)? To this end, and with a sense of obligation, we set about creating a course, to be offered at VCU, which would provide us and others with such an opportunity. "Bicentennial America" was the result. It was to be an attempt to define the direction of the nation over two centuries and to probe in our national maturity the meaning of our origins.

Unfortunately, even within the university, we faced a justifiable aversion to "Buy-centennialism." At registration, it sometimes felt as though we were sitting surrounded by sweatshirts and diaper bags emblazoned with screaming eagles. "Not more Bicentennial! Don't we have enough?" How could we explain to the student that we felt the same way about the "Buy-centennial"—but not the real Bicentennial? But fifteen presumably penetrating spirits saw this for themselves; and, on a January evening, we started to dig apprehensively for an authentic heritage.

The group engaged in this effort reflected the special constituency of VCU. In addition to a proper complement of full-time students, we found that our group included a flight attendant, a nurse, a legal secretary, a working journalist, a government official involved with

environmental affairs, a retired Army officer, a (self-identified) part-time chicken picker, and others who could provide special perspectives on American society. We had decided to organize our analysis around comparisons of distinct areas of American life in 1776 and 1976. Our sessions would include historical lectures on such topics as the military, the courts, the arts, free speech, and economic opportunity in the early years of the Republic. Guest speakers from VCU's other departments and from the broader Richmond community would then discuss current conditions in each of these areas. (The guests were to be, and have been, active practitioners in each field: government officials, a legal aid attorney, an art historian, a banker, and others.) This ready accessibility of informed speakers is one of the prime advantages of a university with an urban location and a diverse academic mission. We were not about to overlook these resources as we explored America.

The diverse character of the students and guests in our seminar almost guaranteed that the ensuing discussion of changes (or continuity) in the goals and practice of American life would be stimulating.

We also hoped that the instructors would add to the creative diversity of our group. "Team teaching" is an unusual enterprise for college level teachers. We eyed each other a bit suspiciously as the project got under way. But within one session, we concluded with relief that our differences would be complementary rather than contradictory. We have in common our training in history—training acquired in the tumultuous years of the 1960s.

Beyond that, one of us is a colonial and Revolutionary historian, the other a student of the twentieth century. (These complementary areas of interest were the basis for

Drs. Kopf and Schwarz, both assistant professors of history at VCU, teamed up last semester to teach an Evening College course of the same title. Dr. Kopf received his Ph.D. degree from Brandeis University. Dr. Schwarz earned his Ph.D. at Cornell University.



our original teaming.) One of us is from a suburban Roman Catholic background; the other is a product of the Russian-Jewish migration to America's cities. Of equal importance for our course, our academic tastes vary. Viewed in the most favorable light, one of us is theoretical, volatile, impulsive. This contrasted nicely with the more pragmatic, reflective, and probing approach of the other. In all, the flexibility of our department and the special resources available at VCU had allowed us to assemble a group which could probe America's past from a challenging multiplicity of perspectives.

On the first night of our meetings, we were not yet aware of the built-in advantages of our group. In fact, we were afraid that our approach to the monumental review we had decided to undertake might be one of monolithic silence. Nothing is more painful in teaching than "dental discussions," with comments from students extracted only by a professor wielding rhetorical pliers. Our fears were quickly allayed. Almost everyone was prepared confidently to describe the condition of the United States and the significance of the Bicentennial. We merely had to direct the flow of discussion. Later in the semester, as both students and instructors became more aware of the complexity of the problem, discussion became more hesitant and less free. We have been exposed to the facts of our nation's past and our glib ideas have given way to more productive questions.

It is a most pleasant surprise for a teacher to find that a discussion is challenging his or her own preconceptions as much as those of the students. We have had any number of such surprises over the last three months. Our visions of the course of American history have, above all, become more subtle and complex. As their essays on American life indicate, some of our students have shared this experience. (The essays also demonstrate the differences in their visions and ours.) The effort at stocktaking after two centuries has yielded us all a richer sense of the complexities of our own times.

We can best illustrate this accomplishment by recalling the surprising evolution of our own thought as the semester progressed.

The first sessions of our seminar were intended to explore the forces which have operated to maintain order in American society. The founders were, we knew, characterized by a "mistrust of power," as we read in Gordon Wood's *The Creation of the American Republic*. We also knew that the size, strength, and influence of the forces of governmental power had grown remarkably, particularly in the last fifty years. Patrick McSweeney, our first speaker and director of the State Government Management Commission, could offer no prospect of an imminent radical reduction in the size of government. Nor does the deep involvement of the military in industry and on the campuses seem likely to wane in the near future. Ellwood C. Hurford, a retired U.S. Army officer, had to agree at our second session that the standing army feared by many of the nation's founders had become a permanent part of the national life.

We were prepared at this point to fall back into the politically fashionable lament that the simple life of our forebears is gone, that BIG GOVERNMENT and a BIG PENTAGON have destroyed the libertarian dream of the early Republic, that the CIA- and FBI-ridden decade of the Bicentennial marks the ironic expiration of the hopes of the Revolution. Giantism, we thought, in the forces of public order has snuffed out our individual liberties just when we celebrate their birth. But our students wouldn't make it all that easy. They pointed out that however powerful the Pentagon, it had *not* come to dominate the life of the nation. The fears of a standing army, even if a nightmare of the founders, seemed excessive. Might the same be true of the fear of big government?

Here we felt safe in our pessimism. After all, the founders had established a Bill of Rights intended to protect us from the very intrusions of privacy which seemed the leitmotif of America in the age of Watergate. But when we turned our attention to American liberties, our problems multiplied. We were aware that *liberty* had been the watchword of the Revolution. But we discovered that it had a somewhat different meaning for the founders and for us. If the rebels

who led the Revolution had a "mistrust of power," they had a horror of anarchy. Washington and his fellow Revolutionary leaders were frequently members of the elite of a highly structured, hierarchical society and for them liberty was far from absolute.

Leonard Levy notes in *Legacy of Suppression* that Francis Hopkinson, a Signer of the Declaration of Independence, believed in freedom of the press, but argued that "when this privilege is manifestly abused . . . undermining the very foundations of government, ought not that government . . . tear from its bosom the serpent that would sting it to death?" Reading the sources, we could only conclude that Hopkinson and his co-Signers would have been astounded to observe the government of today being stung (and stung hard) by journalistic "serpents" lionized for their services to society.

When we turned to religious freedom, Keith Crim of VCU's Department of Philosophy and Religious Studies helped us to see that the founders favored freedom of religion—but not to the contemporary chaotic extent, knocking the ecclesiastical prop of moral consensus out from under the social order. Indeed, by the time we finished assessing the current exercise of liberty, we concluded that, despite governmental intrusions, we live in conditions which the nation's first citizens would have considered in large part anarchic. Surely they would have seen the art of the America of the 1950s and 1960s (which we examined with Richard Flint of the VCU Department of Art History) as reflective of creative anarchy.

Having spent almost two months constantly retreating from our facile assumptions about the past two hundred years, we agreed to allow the seminar to help us find our bearings. It seemed that the political theory of the Constitution writers and of the American orthodoxy had let us down. Madison and his associates had felt that careful restraints had to be placed on excesses of power in government or despotism would result. Although this has become dogma in American thought, our discussion shed doubt on its accuracy. A government of dimensions beyond the imagination



Dr. Kopf and Dr. Schwarz (right): "We faced a justifiable aversion to 'Buy-centennialism.' "

Photograph by David R. White.

of the founders exists—but with relative freedom. Similarly, the founders had posited restraints on excesses of individual liberty as a necessary condition of a coherent society. We have thrown those restraints aside and, for the time being, survived. It seemed that both of the contradictory fears of the founders, excessive government and excessive anarchy, have been realized. The delicately constrained balance of order and liberty they created seemed to have given way to a wildly malignant growth of the organs of both order and liberty. Either of these cancers should have been fatal to the body politic. Yet the combination seemed not to be.

There were several suggestions made as to the sources of stability in this puzzling and surprising American evolution. The most persuasive was based in the premise that the founders had been correct in their understanding of society all along—if in ways which they could not have predicted. The growth of a modern industrial society had generated an enormous growth in the governmental and bureaucratic forces of potentially oppressive order. But, with a seeming genius, the American political system had created a counterbalancing expansion of the forces of liberty. The original intent of balancing society

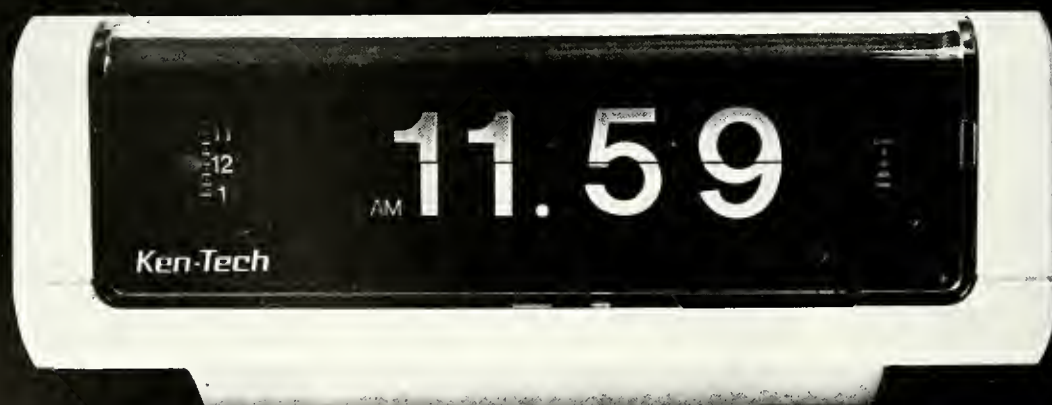
and individual, order and liberty, was intact in America—but with unprecedented forces for order and liberty. This was not a simple conclusion or even one clear in its implications. However, it more accurately described the complex movement of America toward its Bicentennial than the popular preconceptions with which we started our discussions.

Having moved this far (at the time of this writing, the course is still in progress), we now can look back to our confident assertions of the first sessions. They were not foolish; but they now seem incomplete. We had noted then that America today seems on the historic defensive. The rhetorical style developed by Daniel Patrick Moynihan at the U.N. in 1975—proud support of a waning democratic impulse—contrasts sharply with the Revolutionary rhetoric of Thomas Jefferson. We had been young and assertive. Were we now backing into the senility and irrelevance to which so many here and abroad have already assigned us—crying into the wind with Moynihan? We asked if there were anything to celebrate at the Bicentennial.

As we noted even at that first session, rhetoric and reality don't always conform to one another. Jefferson was far more bold in his

language than the fragile, tentative American experiment in independence and democracy justified. Perhaps *we* are a bit less bold than the remarkable course of American history would permit. After all, in an industrial world in which governmental order tends to stifle individual liberties, our system seems to have maintained a paradoxical balance. But at what cost? We are about to explore the tradition of poverty in America—and of wealth, and of environmental control, and of health services. When we are done with those, our attitudes toward America at the Bicentennial might have taken yet another unexpected turn.

Were we right to use this Bicentennial for a serious purpose—to take it seriously? We are not certain that there is an occasion for celebration. But we are certain that there is a need for cerebration. As we and other Americans disgusted with the Bicentennial dump the sweatshirts, banners, and (even) Bicentennial baby blankets overboard, we might add our own stale ideas about the nation—past and present. Then we might retain our legitimate Bicentennial retrospection. A century would seem long enough for putting off fresh appraisals of our condition and course—even for historians.



Why study the future?

By Carol A. Christensen

I'm interested in the future because I'm going to spend the rest of my life there. That's reason enough for studying the future, but there are other reasons, too—reasons I see in St. Francis's well-known prayer in which he asked God for the strength to accept those things he could not change, the courage to change those things he could, and the wisdom to know the difference.

Applied to the future, we study tomorrow for these same reasons: to adjust to what we cannot change, to change what we can, and to find out just which is which—most difficult of all.

If we do not prepare for the future, we are never ready for it when it arrives. Studying the future can serve as an early warning system alerting us to what might happen and making us better able to deal with it. We need this early warning system because most of us dissociate ourselves from what we assume lies ahead for the world at large. Either we don't think in terms of how changes "out there" may affect us, or we somehow exempt ourselves from those changes. We embrace a philosophy of exceptionalism which could well lead to what Alvin Toffler calls "future shock," the disease of

change, a breakdown in our capacity to deal with an ever-changing environment.

This philosophy of exceptionalism has nothing to do with who we are. It is found among elite and mass, the educated and the uneducated. For example, during the first class session of the course on the future which I teach, I asked students to

**'If we do not
prepare for the
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for it when it
arrives'**

list and date five events they considered likely to occur in the future, and five events which they thought likely to happen to *them* in the future. Mostly I was curious about their collective image of the future, but I also wanted to compare their personal and general forecasts. The general forecast was almost uniformly bleak: world military action, revolution in the United States, major crop failures, the collapse of the UN, genetic engineering, terrorist use of atomic weapons, the demise of American democracy, and so on. Their personal forecasts, on the other hand, were almost uniformly rosy and optimistic.

Economic well-being, personally (and socially) rewarding careers, good health, travel, and children all figured prominently in their images of the future.

What was significant (but not surprising, as I suspect most people would respond similarly) were the numerous contradictions between the two sets of forecasts. Some of these inconsistencies were readily apparent: being personally wealthy in a socialist society, being successful in a chosen career when the future is seen to hold diminishing choice, raising several children when there is massive world starvation in 1999, being comfortably retired in 2010 when nuclear holocaust destroys the world in 1990.

Other contradictions were less transparent, but still there. In the general forecast, drastic change and discontinuities were seen as a matter of course. But the unfolding of their own futures, as they saw them, was orderly, continuous, and fairly predictable. Communication with extraterrestrial life, political upheaval in regions of the world, an effective way to tap and use solar energy, guaranteed health care and annual income—all events with profound impact on our lives—contrasted sharply with the business-as-usual tenor of their own personal forecasts. Notably absent were the personal discontinuities in life which statisticians can predict with a high degree of accuracy: divorce, serious illness, and death. Only a handful listed their own death as one of the five events likely to happen to them in the future. Exceptionalism.

Ms. Christensen is an assistant professor of urban studies and planning at VCU. Last spring she taught an evening class offered through the School of Community Services entitled "Introduction to the Study of Futures." She is a doctoral candidate at the University of Minnesota, as well as a Phi Beta Kappa graduate of that institution.



Ms. Christensen: "I'm interested in the future because I'm going to spend the rest of my life there." Photo by David L. Ames.

It is imperative to anticipate change, and to anticipate what change *means*. Nearly all the students assumed their lives would follow the traditional pattern of education, marriage, career, success, and retirement. Yet there is a quiet revolution going on in our society that is changing this traditional pattern. The assumption of a single lifetime career, or education being "completed," for example, is increasingly unlikely to characterize work or schooling in the future. Moreover, all the institutions the students referred to—marriage, education, work—are themselves changing. Not only are certain jobs becoming obsolete, but the *meaning* of a given occupation is changing as well, so that what it "means" to be a lawyer in the years ahead may be very different from what it means to be a lawyer today. The same is true for marriage, for parenthood, for all our institutions and roles. They do not remain stable.

I don't want to make more of this assignment than it warrants. It was impromptu and informal, and only fifteen minutes was allotted for the forecast. But I use it here to illustrate how essential it is to think about change and how it may affect each of us personally. When we discussed the exercise in class, the students were amazed to realize the wide gap between their images of the larger future and their own personal futures. They were amazed to see how alien the concept of the future is to most of us and how independent we perceive ourselves from it.

The unprepared society is as vulnerable to future shock as is the unprepared individual, but the consequences are much more wide-ranging and considerably more frightening. For the individual, future shock means a diminished ability to cope; for the society, future shock can mean an inability to *function*.

One need only think back to the energy crisis of 1973 to see how failure to anticipate can jeopardize the workings of an entire society. As a nation we are unprepared for the quick arrival of that particular future. A friend asked me, why weren't we warned? I told him that projections, beginning some ten years back, had forecast the rapid depletion of our oil reserves. The future came sooner, however, due

to a political event. This explanation was not satisfactory to him. He knew the political end; the press and Washington had covered that well. But *he* hadn't been warned about the diminishing fossil fuel supply, and *he* was an intelligent, concerned citizen. Should he have had to read the scholarly and technical journals to learn of this? He was convinced that someone had not been responsible. To me this episode sadly reflects the lack of anticipation in all our institutions, whether public or private.

Certainly as a society our foresight has not been good. When our decision-making has reflected the long view, it has usually been after a crisis and in response to it. We have been reactive, not anticipatory. Widespread economic forecasting followed the Depression; had it preceded it, the Depression might have been averted, or its devastating impact minimized. Then, as with the energy crisis of 1973, we were caught off guard because we were unprepared.

While being unprepared is an emotionally taxing experience for individuals, it's an increasingly dangerous one for institutions and societies. In the past most of our learning has followed crises, but we cannot afford the luxury of that any longer. The stakes are too high. That is why it is gravely dangerous to regard the energy situation as exclusively, or even largely, a political event trumped up by the Arab world and the major oil companies. To my mind, the energy crisis was mere window-dressing for what is to come as long as we mistakenly assume that the energy future is more of the pre-1973 past.

It takes no great insight to appreciate that there are finite reserves of fossil fuels on this planet. There is no debate on this question. Neither is there any debate on where the consumption trends are taking us. If the entire world were to use oil at the per capita rate the industrialized nations now do, all oil reserves would be depleted by 1982. To assume that the 1973 dislocation was a freakish thing, and that normalcy is returning, is dangerous not only because it is inaccurate, but because it deflects attention away from the development of alternative energy sources. It is urgent that we work on developing these alternatives. With-

out strong efforts to do so, there is no assurance that adequate substitutes can be found. Even *with* strong efforts, we have no such assurance. But without them, it is extremely unlikely that new, adequate, and economical energy sources will be found in time. At this point we do have choices. By delaying we may soon come to a point where we *no longer* have any choice. The two are not the same.

Ultimately it is to influence the future that we study it. It is necessary, as St. Francis said, to accept what we cannot change; but it is also necessary to change what we can and should change. Alvin Toffler frequently says that if we don't change the future, we will be forced to endure it. The knowledge gained from looking ahead permits us to influence what may be ahead. Forecasts—whether on the state of

'We seem to have lost that sense of hope that leads to actively creating the future'

the economy, the growth of crime, or the effect of aerosol cans on the ozone layer—are meant to be useful for decision-making in the present. Coupled with careful planning, they can guide us in steering a course that will avoid the dangers that are forecast or take advantage of the opportunities that are emerging.

Consciously shaping the future according to human purpose is probably the greatest challenge of the years to come. Science and technology have given humankind a newly-acquired capability for immense control over the physical and social environment. More and more we are able to influence our own evolution according to conscious choice. This expanded power to shape our destiny means we must consider not only where we *are* going, but where we *should* be going. Where do we want to go—as individuals, as members of a community, as a society, as a species?

We need to ask ourselves—what are our preferences? our hopes? our goals? What do we *want* the future to be like?

Those who approach the future in this way recognize that the future is our only realm of influence. Unable to change the past, we can change only what has not yet been. Bertrand de Jouvenel, a French futurist, says for the passive person the future is a field of fear and uncertainty. But for the active individual, it is a field of liberty and power, a field of possibilities that can be brought into being. As a society we seem to have lost that sense of hope and possibility that leads to actively creating the future. Historically, much interest in the future has rested on the hopeful belief that what is not yet may yet be. For centuries the future has been synonymous with a state better than the present: the best was yet to be. But now, for many people, the future lies in the past: the best has already been.

Many Americans today prefer not to think of the future at all, and when they do, it is generally with fear and dread. They see the future as bringing more restrictions, more scarcities, more of everything frightening, hideous, and intolerable. I have heard many elderly people candidly say they were glad they had lived when they had, and grateful they would not be alive "when the future arrives." An optimistic person is rare; someone who *admits* to optimism is rarer yet. Even in academic circles, where the minds of the young are daily influenced, optimism towards the future is positively out of fashion. Our collective image of the future is summarized in the date 1984. For millions of people, many of whom have never read his book, George Orwell's dystopia has become a chilling symbol of a future they do not wish and feel powerless to change. I understand that proposals have been made, all in deadly seriousness, to strike 1984 from the calendar.

What happened to radically change the American attitude toward the future? From the time they first settled here, our ancestors held firm to a belief in individual and social betterment. The Christian vision of a better life after this one was secularized in this country as Americans went about building

their heavens on earth. From the seventeenth through the nineteenth centuries, Americans believed utterly in the perfectability of society and human institutions. The American "experiment," as it was widely regarded, was to be an example for the rest of the world to learn from. The lesson was that the good future could be brought into being. The instrument for doing so was an idea called "progress."

In our time we tend to laugh at the naivete of our forebears. We have learned that "progress" is a mixed blessing. While it has given us phenomenal industrial growth and the highest standard of living in the world, its human and environmental costs have been dear. In our time we have rejected the idea that progress inevitably leads to a better state. We no longer accept the notion that somewhere an invisible hand is guiding our society and making sure that all the pieces fit together in a workable way. This rejection of the benevolent progress theory is probably late in coming, and we are better off for having got rid of it. But in junking one inaccurate and dangerous guiding image, we have substituted another inaccurate and equally dangerous one. We now widely assume that the future moves on its own inevitable course. We now widely believe we cannot influence it, and therefore we do not try. But in doing nothing to shape it, we ensure the very kind of future we most fear! The future *is* open. It has not yet arrived. It starts with *our* actions in the present. We are shaping the future every day. Isn't it better to shape that future consciously and according to a vision of a better world? Isn't it our responsibility to do so?

Contemporary Futurism

Although speculation about tomorrow is a very old human activity, systematically and rigorously exploring the future is fairly recent. In the last few years, futurism has become a respected field of study, and many organizations have begun to incorporate "futures" into their activities. A half dozen think-tanks devoted exclusively to studying the future have emerged. Other established institutes, such as the Brookings Institute, the Center for the Study of Democratic Institutions,

and Stanford Research Institute, are directing more of their efforts towards futures concerns. Futurism has its own publications and organizations. The World Future Society, formed in 1966, now claims some 16,000 members, most of them U.S. residents. A dozen states, among them Hawaii, Iowa, North Carolina, Minnesota, and Washington, have established commissions on the future. (A similar proposal to establish a Commission on Virginia 2000 was not successful in this legislative session.) Several universities offer graduate degrees in futurism, and many more colleges and universities offer futures courses and degree programs. In secondary school social studies classes, units on futurism are becoming an important part of the curriculum.

Surprisingly, business has been

'Many prefer not to think of the future at all, and when they do, it is with fear and dread'

more receptive to futurism than has the academic world. Business may be the most conservative and cautious of American institutions, but its success has always depended on a fairly accurate assessment of where the society is going. Recognizing the practicality of foresight, many corporations are enrolling their management-level executives in courses on the future. General Electric Company retains a staff futurist. So does Univac, the large computer corporation. I read all this activity as very good news, since it suggests we may at last be breaking the bond of social pessimism that has gripped our society in recent years.

Future studies emerged as a serious field in the 1960s when individuals from many different nations and disciplines became increasingly convinced that our age was fundamentally different from any before. And ours *is* a novel age. For the first time in human history there is

the possibility that no future at all will appear unless we ensure its safe arrival. The problems which humankind faces are unprecedented, if not in kind then certainly in magnitude and consequence. The possibility of total annihilation through nuclear war, pollution severe enough to threaten the entire life-support system of the planet, the likelihood of near-total exhaustion of the earth's non-renewable resources within our lifetime, the prospect of massive starvation and a vast "die-off" due to overpopulation—these are new problems.

If it is the worst of times for humankind, it is also the best of times. No age before ours has ever achieved the capability to improve the material condition of *all* humankind. We have the means to eradicate poverty, disease, premature and senseless death. For the first time in history we can enrich *all* human life materially and thereby release humankind to attend to its spiritual growth. If science and technology have brought about the great problems of our time, so have they given us the tools for liberating the human being from what, for so long, has been considered inevitable.

What is to be our guide in handling these new possibilities and novel conditions? How shall we use our increased power over nature and ourselves?

Our fundamental dilemma, as several wise people have pointed out, is that although all decisions are about the future, all knowledge is about the past. It is becoming painfully apparent that the past is no longer an adequate guide to understanding the present or directing the future. Under conditions of slow technological and social change, what went before can provide a reasonable index to what lies ahead. But when there is rapid change, as in our society, the past is much less useful in helping us understand the future. We are all immigrants in time, as Margaret Mead has said; we are like the first generation in a new country where everything is alien to us.

The changes characterizing our time are seen not only in the Big Issues of population, ecocide, and political integration; change is the byword in all facets of our society. What in the past has prepared us to

contend with such recent novelties as the multinational corporation, now a major political factor? What has prepared us for artificial insemination, for petro dollars, for organ transplants, for the computerization of society, for worldwide liberation movements? The futurism movement arose in response to the need to anticipate and manage change. At the same time, the refinement of scientific knowledge and tools, which permit more reliable anticipation, makes it possible for more and more of the future to be brought under human control.

The futurism movement is an international one, although it is strongest in the western, highly industrialized nations where technological and social change have been most rapid. Futurism cuts across national, ideological, and disciplinary lines, and is not a discipline in the traditional sense. It is questionable whether this is possible given its diverse subject matter, and it is probably undesirable, too. Much of the field's vitality stems from the absence of a *single* agreed-upon perspective and methodology, and since the field arose in part to counter rigid specialization as a means of understanding the world, its generalist perspective seems worth preserving. The true value of future studies lies in integrating and synthesizing knowledge from all fields and bringing it to bear upon the future. If traditional disciplines were able to do this, then future studies would not be necessary.

While there are "professional futurists" (such as Herman Kahn, Theodore Gordon, Olaf Helmer, and others associated with "futures" institutes), the term "futurist" is frequently applied to individuals who wouldn't necessarily call themselves that. Thus futurists include environmentalists like Paul Erlich and Barry Commoner, economists like Robert Heilbroner and Kenneth Boulding, systems analysts like Jay Forrester and Dennis Meadows, anthropologists like Margaret Mead, science fiction writers like Arthur C. Clarke, and innovators like Buckminster Fuller and Paolo Soleri. These people are futurists because their work is future-oriented, because they speak and write of things which have wide applicability, and because their thinking is holistic. Since their work is largely devoted to where

we are going, or where we ought to be going, they are futurists, regardless of their disciplinary training.

Futurism is both a perspective and a content. The perspective is one which incorporates both a greater sense of futurity (longer time horizons) and more variables than traditional disciplines permit. The content of future studies covers all manner of forecasts, conjectures, trends, analyses, issues, and events as they bear on the future. Futurists consider resources, population, the economy, policy, technology, and institutions such as the family, religion, and government. They study values and attitudes, change itself, and the nature of time. The purpose of their studies is to aid decision-makers in both the public and private sectors by informing them of emerging dangers, opportunities, and needs.

'Shaping the future according to human purpose is the greatest challenge of the years to come'

The idea of *alternative* futures is the most important single concept in future studies. It is central to all discussions about the future. Futurists reject the notion of a *single* future. Instead they believe there are an infinite number of alternative futures with greater or lesser probabilities of occurring. This is true whether one is talking about the future of the world, the future of an institution, or the future of an individual. In exploring probable and possible alternative futures, futurists build models, write scenarios, consult expert opinion, evaluate trends, chart the impact of innovations, and so on.

Since it is impossible to predict the *real* future, futurists have found the concept of alternative futures to be very useful for planning. By incorporating the concept of alternative futures into our planning, we increase the probability that we will be prepared for the "real" future. If

we prepare for several possibilities, we have a better chance of hitting the "right" one than if we prepare for only one.

There are tremendous difficulties in studying the future. Even a quick glance at the "futures" literature illustrates that futurists do not agree on what the future holds. Frequently they have very different opinions. The current debate on the issue of growth is an example. One group holds that continued population and industrial growth will lead to world social and economic collapse within the next fifty years. Another group argues that this is nonsense, and that *stopping* growth will lead to world-wide disaster. Whom is one to believe? Both groups have impeccable credentials, both present internally coherent arguments, and both have data to support their conclusions. But they do not share the same assumptions, and all projections and forecasts rest ultimately on the assumptions of the forecaster. It is important to remember that *all* statements about the future—regardless of how sophisticated the models and computers used to produce them—are not facts, but *judgments*.

Which brings us to another difficulty in studying the future: the absence of data, of realities to measure. We cannot collect "hard" data because the future hasn't arrived yet, and we won't have that kind of data until the future becomes the past (at which time historians, not futurists, will study it). Besides, "future" is a relational term; it isn't a thing in itself. It must be studied in terms of the future of *some thing*, and charting the future of *some thing* is enormously complex given the great number of variables that go into affecting the future of that thing. Thus the "data" futurists use are frequently trends, past or present, projected into the future. Sometimes projected trends will prove to be continuing (and therefore an accurate description of the future), and sometimes they will not. No trend analysis can predict something truly novel. The future will always hold some surprises, and we must learn to expect the unexpected. Because of this, futurism can never become an exact science. It will always have a sizable dose of the art in it, of educated speculation.

Despite the difficulties in studying the future and the impossibility of ever "knowing" it absolutely, studying the future systematically is still worthwhile. It is time to debunk the myth that the future is totally unknowable while the past is largely knowable. In the first place, the past remains the same, but the *record* of the past does not. And it is the record that we are dealing with when we study history. We are constantly rewriting history, or reinterpreting it, as new information and perspectives come into play. History is no exact science either, but it attempts closer and closer approximations of "the truth."

Secondly, we *can* know certain things about the future. We can assign, with a high degree of accuracy, probabilities to various events.

And finally, we are all practicing futurists anyway. We constantly make conjectures about the future. All of our actions, whether individual or societal, originate from some image of the future which guides our actions in the present. I get up each morning and walk to class assuming it will be there. I pay into the social security system expecting a return when I retire. The same is true for organizations, institutions, whole societies—we operate on certain expectations of the future. But the critical question is—are they the correct ones? Is the image leading us in the present the right one? Especially in times of rapid change and growing complexity, our intuitive notions about the future are not always accurate. This is why we explore the future systematically—so that we can proceed into the future more knowingly and more intelligently.

We sometimes refrain from discussing the future because our conjectures may prove wrong. History is replete with forecasts that never came true and statements about the future that proved utterly wrong. Recently I saw again the classic film, *Things to Come*, produced in 1936 and based on the projections of H. G. Wells. Judged from its gadgetry, the society of the 1970s which Wells prophesied in the early years of this century was far more sophisticated technologically than we are today, but the great technological challenge of the year 2025, as he saw it, was traveling to the moon! Even so, I would argue that Wells's forecast was a good one.

"Good" forecasts are good not necessarily because they are correct. A forecast may be inaccurate and simultaneously very useful for identifying issues and directing attention where it needs to be directed. The Wells film raised the important issue of where technology may be taking human civilization. Contemporary forecasts serve the same purpose. *I hope* the projections on population and industrial growth leading to a total system collapse within the next half century are wrong. *I hope* the optimistic projections on where growth is leading are correct. But even if these projections are wrong (and *nobody* can know this until the next century arrives), they are certainly not irrelevant. Growth needs to be widely discussed, and related questions and issues must be explored.

By helping focus public attention on critical questions, forecasts can play an especially important role in a democratic society where policy is formulated on the basis of what the individual citizen believes. Because the majority view tends to determine what the issues are, and because the democrat forms opinions on the basis of what he or she feels, democracy has always had problems addressing critical issues. As Walter Lippman pointed out some fifty years ago, effective democracy rests on *informed* opinion, not simply opinions derived from a good heart and a reasoning mind. Democracy has always required a great deal of information exchange, and effective democratic societies are necessarily information-rich. The first amendment, the mass media, universal literacy, and public education—all are needed by the democratic society for its own survival. While informed opinions have always been indispensable for democracy, we have never needed them more than now as daily we are called upon to make decisions with far greater impact than ever before. It is no longer satisfactory to formulate our opinions on the assumption that "reality" corresponds to the pictures in our heads—pictures formed on what we see and what we choose to believe. Good forecasts can bring the "unseen" environment into the realm of public discussion. They can help focus attention where it should be focused.

VCU and "Futures Report"

Managing change in a complex world makes planning for the future essential. To plan effectively, we must explore what is probable, possible, and preferable. This is largely an educational task.

During the past year, David Ames and I have been developing an educational program called "Futures Report" designed to encourage thinking about the future. "Futures Report" is a series of multi-media presentations and related learning materials. Each of the eight programs in the series capsulizes major trends, events, and ideas which are shaping our changing society. Titles in the series include "The Future is Now," "The Limits to Growth: Mankind's Predicament," "Women and the Future: Images and Choice," "The Family and Its Future," "Work and the Future," "Educational Futures," "Designing Values for the Future," and "Creating the Future."

Each multi-media presentation introduces the subject and the many viewpoints, issues, and ideas surrounding it, and reprint materials expand on what has been presented and raise other issues and topics. Discussion is a central part of each program. A resource person is present to clarify ideas, answer questions, and encourage participants to share their responses and ideas.

"Futures Report" is produced by the School of Community Services. It is also one of VCU's official Bicentennial projects and has been designated the university's continuing Bicentennial activity.

The series is available to individuals and groups interested in exploring and designing the future. Because it is urgent that *all* people become involved in creating the future, "Futures Report" will be offered to the community and to interested groups within it.

For further information about "Futures Report" and for reservations, contact: Carol A. Christensen, Assistant Professor of Urban Studies and Planning, and Project Director, "Futures Report," or David L. Ames, Associate Dean, School of Community Services, at Virginia Commonwealth University, 909 West Franklin Street, Richmond, Virginia 23284; telephone (804) 770-6953.

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Bucky Fuller is a verb

By B.D. (Buz) Grossberg

*I live on Earth at present,
and I don't know what I am.
I know that I am not a category.
I am not a thing—a noun.
I seem to be a verb,
an evolutionary process—
an integral function of the universe.*

Bucky. A very unassuming name for a person who has been referred to as "the ambassador from tomorrow," and a "Renaissance man." Designer, inventor, engineer, mathematician, architect, cartographer, philosopher, poet, choreographer, visionary—R. Buckminster Fuller is not any one of these, but the aggregate of all these fields, and then some. Today at age eight-one, Fuller stands as a living monument to the potential of twentieth-century man.

I had the opportunity to meet and

*R. Buckminster Fuller lectured at VCU on February 18 at the request of Buz Grossberg, a senior majoring in sociology. Buz, who has long admired Fuller, worked through university channels in obtaining the \$3,000 needed to bring the famous futurist to the university. Fuller's lecture at the Mosque was open to the public without charge. This article, with quotations from Fuller's book *I Seem to Be a Verb*, is Grossberg's first to be published. Material for the story came from Fuller's lecture, writings, and conversations with VCU students.*

Buz is twenty-three and is from Richmond. In 1973 he interrupted his studies and went to Israel, where he worked on a kibbutz.

talk to Bucky Fuller during his visit to VCU this past February. My first contact with Fuller began at Byrd International Airport the afternoon of his evening lecture at the university. When he walked into the terminal accompanied by an assistant and encircled by the almost frantic maneuvering of four VCU photographers, I naively inquired whether he had had a good trip. "I can't answer that," Fuller stated bluntly. "This trip is continuous. Travel is normal for me." That doesn't sound significant until one learns that Bucky travels more than 250,000 miles a year and has logged more than six million miles so far. During these jaunts around the globe, he may lecture at eighty-five universities and societies, advise and consult thirty-five other organizations (including the U.S. Congress), and pick up an honorary degree or two (he now has more than twenty). Even in view of these astounding statistics, however, the real essence of his reply appears in the opening quote. Bucky is a dynamic individual constantly developing, thinking, moving—becoming.

Whenever I draw a circle I immediately want to step out of it.

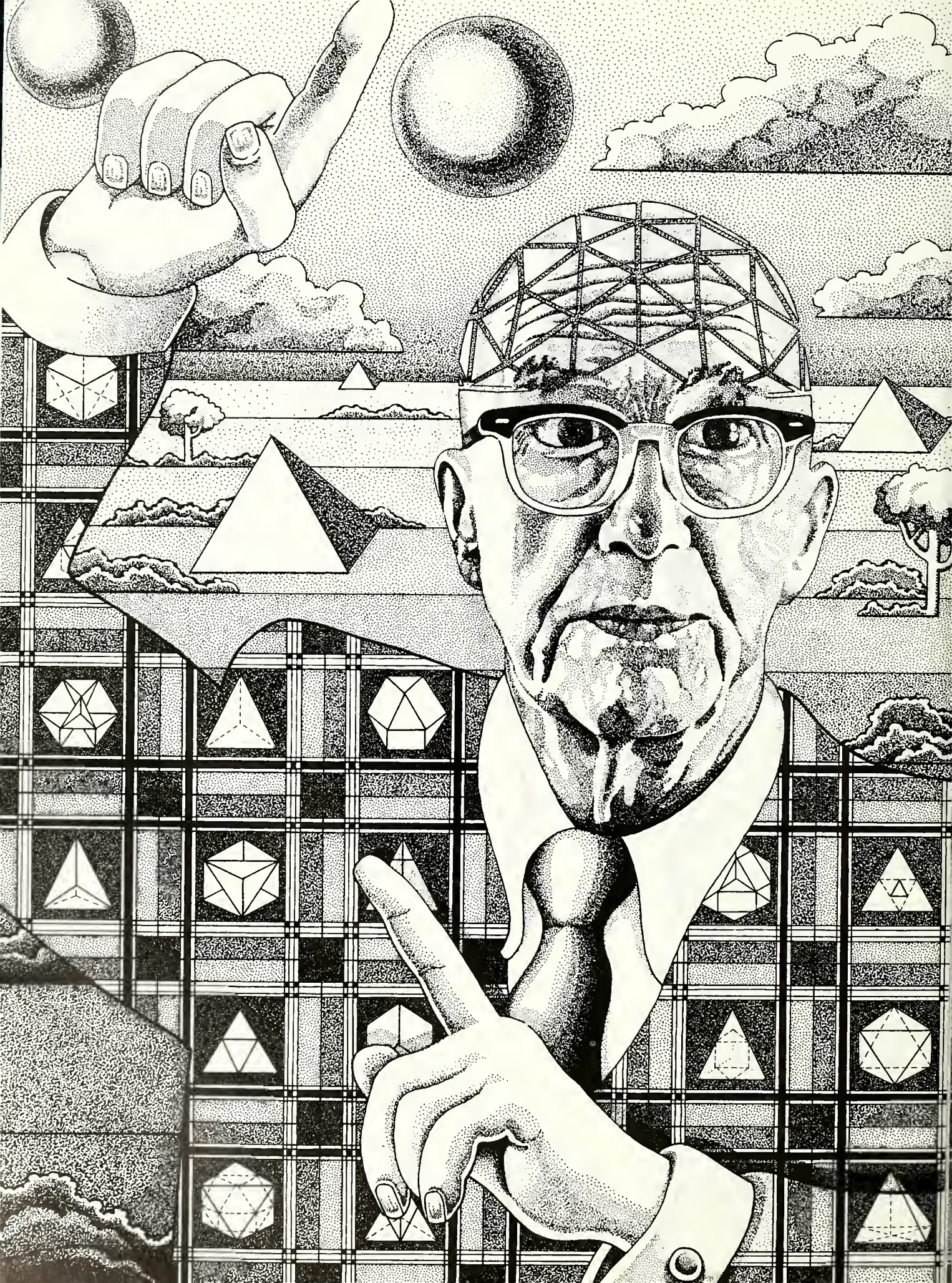
Fuller, the son of a Boston merchant, is a product of his experiences. It was not discovered until he had reached the age of four that Bucky was abnormally farsighted. He was unable to distinguish

details—able to see only large patterns. Even though his vision was corrected with glasses, Fuller believes that his emphasis upon big patterns throughout his life resulted from this childhood experience.

Bucky attended exclusive schools throughout his childhood and adolescence, receiving a better-than-average education. He entered Harvard at the suggestion of his parents, but that was not where he wanted to be. Just before his first semester exams, Bucky left Harvard, went to New York City, and dined all the girls from an entire chorus line at the Winter Garden Theatre. He made certain he spent all the money his parents had provided for the entire school year.

Not overly pleased by this behavior, Bucky's parents sent him to work in a Canadian cotton mill and then back to Harvard for another go-around. After a similar binge, Bucky was out of school again. His third experience with Harvard, in 1961, was the acceptance of the Charles Elliot Norton Professorship, once occupied by T. S. Eliot.

In the interim, however, much happened. He married Anne Hewlitt, the daughter of an architect, and joined the Navy. He was stationed on a crash boat, which was responsible for picking up downed pilots from plane disasters at sea. Watching men drown because the Navy lacked the equipment to rescue them was the motivation behind his invention of a mechanism which could haul a



plane out of the water before the pilot drowned. The Navy responded to his ingenuity by appointing him to the Naval Academy at Annapolis, Maryland. He graduated from the academy with a degree in engineering.

Man wears blinders. He rarely sees beyond his feed bag.

In 1922 Fuller entered the business world. He and his father-in-law invented a synthetic brick. This new brick was manufactured with holes through it in order to join it to an adjacent brick simply by pouring cement through the holes. It was, unfortunately, an invention before its time. The construction industry and the labor unions worked together to suppress its use. The brick required less material for production and less labor for laying. Five years after his first attempt in business, his company folded.

At this point, Fuller was living in a dirty tenement in northwest Chicago. His child died there, a victim of spinal meningitis and polio. He had no money. For the first time in his life, Bucky was at the bottom of the world. One night he walked to the shore of Lake Michigan and contemplated suicide. This was the turning point of his life. By rethinking this course of action, he denied himself the option of death and drew these conclusions:

You do not belong to you. You've had more industrial, scientific, and social experiences than most of your steadier contemporaries. If these are put into order, they might be of use. Whether you care to be or not, you are the custodian of a vital resource.

From this point in his life, Bucky became committed to humanity. For two years, he declined to utter a word, so as to be able to evaluate his knowledge, his experience, and his relative position in the universe. The outcome was a dedication to increasing the advantage of human beings through creating artifacts. By making himself a guinea pig, he would attempt to discover what nature—"the power structure of the ages"—is trying to do.

The new life needs to be inspired with the realization that the new advantages were gained through great gropes in the

dark by unknown, unsung intellectual explorers.

With this new orientation firmly realized, Fuller soon designed the "dymaxion house." It was the outcome of his most recognized philosophy, "doing more with less." As Fuller has so aptly stated it:

This is to be achieved by upping the performance per each unit of invested world resources until so much more is accomplished with so much less that a high standard of living will be effected for all of humanity.

The dymaxion house weighed 3 tons as opposed to the 100 tons of a conventional structure. It was designed to be built on an assembly line in order to reduce the cost and increase the production. Delivered by air, the structure would be hung from a pole which carried all the necessary utilities. The features of the house included air conditioning, built-in furniture, automatic laundry, and a closed system to recycle water and waste material. This fourth feature was not seriously applied until the institution of the space program, thirty years later.

Man's preoccupation with irrelevancies has conditioned him to believe that security is having more with more—fortress, cathedral, mansion. "Secure as the Rock of Gibraltar." Man in fear built his castle with thicker and thicker walls. . .

Despite the nonacceptance of his dymaxion house, Bucky continued to search for other artifacts which could aid his fellow man. The dymaxion car was his next grand invention. Made of superlight materials and having only three wheels, this streamlined automobile could turn a circle in its own length. It had the capability of reaching a speed of 120 miles per hour using a ninety horsepower engine. With a carrying capacity of eleven passengers, it was certainly a horse of a different color. However, because of its radical departure from the conventional designs of the major auto manufacturers, it, too, was blacklisted.

It should be clear now that Bucky and his inventions have not been held in the highest esteem within the circles of the Establishment. Systematically excluded from established processes, Bucky has decided

that it is not always necessary for his inventions to be utilized at the time of their conception. He firmly believes they will be openly accepted when the time is right.

Invention often occurs when individuals, frustrated by circumstances, try to transform the environment rather than human nature.

Undoubtedly the most well-known and perhaps his most important discovery is the geodesic dome. The geodesic form, built upon the framework of a tetrahedron, provides "optimum enclosure capabilities." The fundamental properties of this structure provide it with great strength by dispersing stress over the entire surface area of the dome. From high atop Mount Fuji to the frozen tundra of the South Pole, domes are being utilized for numerous purposes. The U.S. military has used domes for fifteen years as low-cost, mobile enclosures. They may be quickly assembled on the spot or transferred fully assembled by helicopter. Radar domes, housing, auditoriums, and warehousing are but some of the ways domes are being put to use.

Domes epitomize Fuller's philosophy of "doing more with less." Bucky has proposed constructing a dome over the island of Manhattan in New York City. It would extend 200 feet over the top of the Empire State Building yet use less steel than was needed to construct the H.M.S. *Queen Mary*—a staggering ratio of material to space enclosed.

Because our education system has taught us to think and measure in terms of squares, we have come to assume that a cubical house has structural integrity. But it hasn't. We often start out on all the wrong bases.

Even though there are more than 100,000 domes in use today, opposition to them remains strong. Labor unions oppose them because of their labor-saving characteristics. A dome used as an auditorium seating 6,000 people can be erected in one day. Insurance companies believe it to be a risky proposition, and banks avoid lending mortgage money for that reason. Even in light of these circumstances, Bucky is optimistic. He believes that when our economic

situation becomes strained enough, we will turn to his domes with open arms. As he puts it, "When we need them, here they are."

There is only one revolution tolerable to all men, all societies, all political systems: revolution by design and invention. Every nation welcomed the transistor. Every nation will welcome desalinization. All the world, properly informed of the significance of the design and invention revolution, would welcome it. Science, not politics, centralizes society. The telegraph wire communized the world.

Through his years of doing rather than persuading, Bucky has accumulated 150 patents in fifty-eight countries, with an additional twenty-eight or more pending. However, Bucky Fuller is considerably more than an "anticipatory designer." He is a visionary, a philosopher, a social evolutionary. He has expounded on topics of great relevance to the future of mankind.

I always say to myself, what is the most important thing we can think about at this extraordinary moment.

Addressing himself to the problems of politics, Bucky says no, we should have neither politics nor a political state. Government should serve a strictly housekeeping function. In order for man to survive, we must behave in accordance with the earth as a mechanical system. All its parts must function in a coordinated manner to insure the proper functioning of the whole. Bucky's concept of "Spaceship Earth" thus necessitates the abolition of all barriers to the attainment of this goal.

The age-old assumption that political reform can bring about peace and plenty is fallacious. At the root of our troubles is the Malthusian and Darwinian assumption that there is not enough in the world to go around—not enough for even a majority of mankind to survive more than half its potential life-span. This "you or me to the death" situation leads to a showdown by arms. An alternative to politics—the design science revolution—alone can solve the problem.

Education is another area which concerns Bucky. He supports the common belief that our educational

system, rather than preparing us for dealing with our lives in the present and in the future, stifles ingenuity and creativity, promotes unfounded propositions, and thus denies us the tools necessary for our ultimate survival. Bucky insists children are naturally comprehensive thinkers. However, they are traditionally taught to think about the parts first. Consequently, they never come back to the whole. Education should start with all the generalized principles known. Then these can be used to project on the specific.

Society is vulnerable because it places too much confidence in educational concepts that we are learning are unsound.

According to Fullerian philosophy, through education man can discover what he really wants and how he can realize fulfillment of his wants. In Philadelphia, Bucky supports an educational and problem-solving experiment known as World Games. Each summer, teachers and students meet together in a think-tank situation. The goal is to "predict in advance, and solve before eruption, potential problems associated with world resources and bearing on human poverty and suffering."

If man chooses oblivion, he can go right on leaving his fate to his political leaders. If he chooses utopia, he must initiate an enormous educational program—immediately, if not sooner.

Many people would classify Bucky as an optimist. Bucky, however, would refer to himself as a realist. Man is at a crucial point in his social evolutionary process. We have "the capability and options to make it." The question is whether man will choose to do so. Success or failure of our spaceship is the responsibility of everyone aboard.

Forty-nine years ago, Bucky Fuller made his choice between making sense or making money. Since "they are mutually exclusive," he chose to make sense. Bucky, at one time called a crackpot, has traveled as far as anyone toward the pinnacle of intellectual success. His books, papers, and inventions stand as his contribution to our survival. Bucky Fuller symbolizes the total experience of twentieth century man and our hope for the future.



Dr. George Weidig (M.D. '73) checks the blood pressure of this man who is bedridden at home. Looking on is the patient's wife.

Doctors still make house calls in Blackstone

Photography By Gary Burns

Blackstone is a farming community, planted in the furrows of piedmont Virginia. Like so many other small towns in rural Southside, Blackstone ekes out its existence largely from the land and the several small industries which dominate the local economy. Textile mills, a furniture factory, a shoe factory, and a Pepsi-Cola bottling plant provide jobs for most of Blackstone's 4,000 residents. Tobacco, soybeans, and dairying are staples of the rolling farm lands that ring the town and spread across surrounding Nottoway County.

U. S. Highway 460, which used to run through the center of Blackstone,

now bypasses the town limits. Since completion of the bypass a few years ago, merchants along a four block stretch of Main Street have resorted to sprucing up their storefronts. The hardware and dry goods stores now have facings of aluminum siding.

Just a few blocks south of the town's main intersection squats a modern, but modest, one-story brick structure. There is no sign, but several dozen cars line the gravel parking lot.

"Is this the Blackstone Family Practice Center?" asked a recent visitor from Richmond. "Yes, sir," replied a pregnant woman towing a reluctant

toddler toward the front entrance.

Signs are not a necessity in this little community. Everyone there knows that the center is the only place for miles where one can go for medical attention.

Inside the waiting area, patients and their families leaf through well-thumbed copies of *Reader's Digest* and *Good Housekeeping*. As their names are called, they enter an antiseptic-looking corridor lined with cubical examining rooms, offices, and laboratories. Here an efficient team of doctors, nurses, and technicians tend to virtually every complaint imaginable—from headaches to



Dr. Epes Harris (M.D. '51) says that health care in Blackstone has improved as a result of the family practice residency program established at this clinic five years ago.



Dr. Ken Jones (M.D. '74) comforts a little girl who was brought to the center after she received a head injury in an automobile accident.

athlete's foot, broken bones to hypertension.

The Blackstone Family Practice Center, however, is more than just a group of doctors who treat the everyday ills of a rural population. This model facility, along with six similar teaching practices in other parts of the commonwealth, is helping to train aspiring family doctors. When they complete their residencies, most of these physicians will enter practice in the state, thereby helping to improve the patterns of health care available to Virginians.

Although family practice is the newest of medicine's twenty specialties, it has been around since the days of the country doctor who plied the back roads, making all-but-forgotten house calls. But in recent years family doctors have been in short supply. One reason for the shortage has been that family practice lacked the glamour and prestige of the newer specialties and, sometimes, the financial rewards as well. The result has been too few physicians to take care of routine illnesses and too many specialists, particularly general surgeons and pathologists. But all of this is beginning to change, thanks in part to new emphasis upon the training of family practitioners at medical schools around the country.

During the late sixties, the Virginia Farm Bureau, the Virginia Academy of Family Physicians, and the Virginia Council for Health and Medical Care alerted the public and legislators to the need to replenish the state's dwindling supply of family doctors. In 1969 the General Assembly responded by appropriating funds earmarked specifically for the training of family practitioners at the Medical College of Virginia and at the University of Virginia Medical Center. By July of the following year, one of the first departments of family practice in the nation had been established within the School of Medicine at MCV.

The first task before medical educators was to assess the seriousness of the physician shortage and to pinpoint areas of greatest need. Their survey showed that three counties in Virginia had no physician at all, and that sixty counties were without either internists or pediatricians. They also found that many family doctors in rural areas were elderly and that their attrition rate through death and retirement was high.

Curiously enough, rural counties were not the only areas suffering from a doctor shortage. The manpower study revealed that rapidly growing communities in Tidewater

and Northern Virginia also had chronic deficiencies of family doctors.

Responding then to the areas of greatest need, MCV established centers in Blackstone, Newport News, Virginia Beach, and Fairfax for the training of thirty specialists in family practice a year. (In July a fifth center will open in burgeoning Chesterfield County, just outside of Richmond. It will produce six doctors annually, making the MCV program in family practice the largest in the country.) The University of Virginia also has similar residency training programs in Charlottesville and Roanoke, while Eastern Virginia Medical School operates one in Norfolk.

Specialists in family practice, as the term implies, are trained to treat every member of the family—male and female, adults and children. Like general practitioners, they treat the routine medical problems of individuals, yet they differ in that they have an expressed commitment to provide continuing comprehensive care for families. Another difference is in their formal training: family practitioners receive specialized training in three-year residency programs, whereas general practitioners, with only a year's internship in a hospital, do not usually qualify as "family doctors" until after years of practice.



Emergency treatment is often provided at the Blackstone clinic. Here a woman is wheeled to an awaiting ambulance for the sixty mile trip to MCV Hospitals.



Family counseling is a unique aspect of family practice training. Dr. Bernard Westerling, a resident in the Blackstone program, advises a young couple with marital problems.

Dr. A. Epes Harris, director of the Blackstone Family Practice Center, returned to his hometown of Blackstone to practice general medicine after graduating from medical school and completing his internship at MCV in 1952. He recalls: "When I went to medical school, I was taught to take care of patients who were sick enough to be flat on their backs in the hospital, but I wasn't taught anything about the kind of patients I'd be seeing when I went into practice"—patients he describes as being well enough to get to a doctor's office under their own power. After about ten years of practice, Dr. Harris says he evolved into a family doctor, "a doctor who is interested in the patient as a whole, not just in the diseases the patient might have."

That is not to say that Dr. Harris and other primary care physicians—general practitioners, internists, and pediatricians—did not become absolutely superb family doctors. It just took them longer, explains Dr. Fitzhugh Mayo, chairman of MCV's Department of Family Practice. Nor does Dr. Mayo claim that the family doctors now coming out of the new program are any better than those who were taught by their own practices and by consultants in the com-

munity. "It just means they had to do it the hard way."

"This is the first formal program devised that really focuses on primary care problems of patients," states Mayo, a 1955 graduate of the MCV School of Medicine. "We hope our residents [in family practice] will be better than we were three years out of medical school and that it will take them a much shorter time to become really polished [family doctors]."

Dr. Harris, who is now certified by the American Board of Family Practice, amplifies his point about traditional medical education by recounting the findings of a recently completed analysis of the 25,000 patient visits paid to the Blackstone Family Practice Center last year. Less than 2 percent of the visits, he says, resulted in hospitalization; the other 98 percent of the medical problems were resolved right at the center. A soon-to-be-released statewide survey involving more than 140,000 patients will also reveal similar percentages, which do not reconcile at all well with the fact that almost all medical training traditionally has been conducted in hospitals.

One of the ironies of medical education all along has been that doctors had to actually enter practice

before finding out about the "real world" of family medicine. Now, many programs, including the highly successful family practice residencies at MCV, are training young doctors in community settings, where they gain valuable experience in caring for typical patient populations.

For example, first-year residents spend most of their time rotating through the various specialty areas in a nearby general hospital. (In the case of those at Blackstone, which has no hospital, residents commute to MCV hospitals, sixty miles away.) During their second and third years, residents tend to patients coming to the family practice centers; their performances closely monitored by the center's board-certified family specialists who serve as MCV faculty. In addition, the residents participate in daily two-hour teaching conferences with visiting specialists, many of whom have traveled from MCV. These specialists not only present lectures but also consult with residents about patients from the community who have troublesome cases related to the day's topic.

Residents also get heavy doses of instruction in the behavioral sciences, studying every facet of human behavior from the causes of child abuse



Teaching conferences with visiting specialists are part of the daily routine for residents in family practice. Here, Dr. William Steinke (center), a cardiologist, reviews a patient's records while residents raise questions related to the case.

X-rays get a careful reading by Dr. Rick Schoen, a family practice resident, and his mentor, Dr. Harris (right).

to the emotional problems of menopause. Another feature of the program is sessions in business management. Residents learn how to run the economic side of a practice before venturing out to establish practices of their own.

Drs. Kenneth E. Jones, James E. McDowell, and Lawrence E. Bennett are representative of the young family doctors who will soon complete their residencies and go into practice. The three of them, all residents in training at Blackstone, say they want to locate in Southwest Virginia, possibly going into practice together. Like most of the doctors completing the program, they want to enter a group practice so they can "share night coverage and each other's thoughts during the day," explains Dr. Jones, a native of Fairfax, Virginia, and a 1974 graduate of MCV.

Unlike most of the ninety residents in family practice who are Virginians, Drs. McDowell and Bennett are both New Yorkers. Yet they intend to settle in rural Virginia.

Dr. Bennett, a graduate of Rutgers and the medical school at New York University, describes MCV's residency program in family practice as "the best in the country" and characterizes the center at Blackstone as

"one of the few truly rural practices" in existence. After two years in the program, Dr. Bennett is convinced of the value of residencies in settings such as Blackstone. "Here you deal with a broad spectrum of the typical rural town community—black, white; rich, poor; elderly, young"—something he says he would miss if he were in a large medical center serving the inner-city poor.

Dr. McDowell adds that another unique aspect of the program is that the residents live in the communities they serve. "Your patients are your neighbors, the people down the street, the people you buy food and gas from."

It's this involvement in the community which has made the family practice program so successful in Blackstone. For example, residents serve as physicians for the high school football teams, train the county's emergency rescue squads, teach first aid courses to young homemakers, and cover the emergency rooms on weekends at the nearest community hospitals in South Hill and Farmville, both forty miles away.

At first, as might be expected, people in Blackstone were a little wary of these young doctors—some with modish hair, beards, and northern accents. Dr. Harris, director of

the center, says that the entire community has come to support the program and has benefited from the improved health care now available at the family practice center.

Already there is evidence that those who have completed their residencies are fulfilling the mission of the program—that of replenishing Virginia's supply of family doctors.

Of the thirty-nine residents who finished in 1974 and 1975, 85 percent of those entering practice stayed in Virginia, the majority (71 percent) locating in small towns and rural areas. (Ten residents entered military service.) Among the areas which now have new doctors are the towns of Tabb, Chase City, Galax, West Point, Franklin, Shawsville, Culpeper, Sandston, Radford, Smithfield, Ashland, Mechanicsville, and Williamsburg. Just six years ago, medical educators were predicting that physicians would not settle in such places.

"These physicians represent the first major infusion of family doctors in rural Virginia in several decades," reported Dr. Mayo at the American Medical Association's conference on rural health last year. With their successors "they can be expected to become the backbone of the primary care delivery system in Virginia in the years to come."

The scientific method comes to family practice

The training of family doctors at the Medical College of Virginia is scientific—not only in content but also by design. Dr. Fitzhugh Mayo, chairman of the Department of Family Practice, and his colleague Dr. Maurice Wood, director of research, have pioneered in introducing to family practice scientific research methods based upon epidemiology and demography. This approach, believes Dr. Mayo, amounts to bringing family practice out of the prehistoric era and into the twentieth century.

"During the whole span of recorded history—approximately 8,000 years—there have always been family doctors," explains Dr. Mayo. Ancient Egyptian writings, he points out, include references to physicians, "or people who took whatever medical skills they had and related them to people." But scientific medicine, which has been around for only about 200 years, didn't really leap forward until the introduction of the "systems approach" some 50 to 70 years ago. Since then the scientific method has been employed almost exclusively in hospitals and at the end stages of disease.

"What has been needed is the technology—a system of instruments—which would allow us to use the scientific method outside of hospitals in community settings," states Mayo, an M.D. whose educational background also includes a degree in engineering.

Once he became chairman of the family practice department upon its creation in 1970, Dr. Mayo with the help of his colleague Dr. Wood, formerly a general practitioner in

Great Britain, set out to develop a system for recording the medical complaints registered at each of the MCV family practice centers established in Virginia. Later, the system was expanded to include selected nonteaching practices. Today it includes 140,000 patients and involves more than 100 physicians in Virginia, North Carolina, and Kentucky.

The system itself is an integral part of MCV's family practice program and is being used to develop a relevant curriculum for the training of family practitioners. Dr. Wood points out that the system has enabled medical educators to "tailor curriculum . . . to address the major part of the family physician's responsibilities. For instance, above all else, he must be the ultimate expert in the common and frequently occurring diseases. . . . This is where his expertise must lie. He also has to be able to define the interface between himself and other specialists," referring patients to the appropriate specialist when needed.

Earlier this year Drs. Mayo and Wood, along with Dr. David W. Marsland, associate professor of family practice, reported in the prestigious *Journal of Family Practice* the data they had collected over a two-year period. The journal devoted its entire February issue to their report and an analysis of their findings. In his introductory article, the journal's editor declared that this voluminous study "represents the most significant step to date toward the definition of the content of family practice and makes a quantum jump toward new knowledge in this important area."

To record statistically the various health care problems brought to the attention of family physicians, the MCV professors first adapted the Coded Classification of Disease of the British Royal College of General Practitioners for use with the American problem-oriented medical record. After evaluating each patient, the participating physicians recorded the patient complaints on a daily work sheet and their secretaries coded the problems using twenty-two major disease classifications and 607 diagnostic descriptions. On the average, the recording system required ten minutes of the physician's time each day, and thirty minutes of his secretary's. This daily work sheet was then used for keypunching data to be stored and correlated in a computer.

Although data is still being gathered, the published report cataloged more than half a million patient problems—526,196 to be exact—that 88,000 Virginians took to their family physicians between July 1, 1973, and August 1, 1975. The 118 physicians collaborating in the study represented twenty-six private practices in all parts of the state as well as family practice centers in Newport News, Virginia Beach, Fairfax, and Blackstone. The data revealed that there is little difference in patient problems between suburban, urban, and rural areas, except that rural doctors encounter more cases of trauma and respiratory trouble.

The report also ranked the health care problems patients took to their physicians. Leading the list of reasons for visits to the family doctor was the preventive medical examination, such things as annual physicals

and well-baby checkups. Second was hypertension. Injury—lacerations, amputations, contusions, and abrasions—was third. Sore throat was next, followed by acute bronchitis, sprains and strains, and diabetes.

The common cold was the eighth most frequent diagnosis. Obesity was ninth. Influenza-like illness, including feverish colds, were tenth. Acute middle ear infection and depressive neurosis were eleventh and twelfth, respectively.

The Pap test ranked thirteenth, followed by normal pregnancy care, vaginal infection, anxiety neurosis, hardening of the arteries and heart-blood vessel disease. Other frequently occurring ailments include abdominal pain, congestive heart failure, and urinary infection.

All told, the list included 567 diagnoses among the more than half a million patient problems. The 20 diagnoses just named comprised almost one-half of all diagnoses; 169 accounted for 90 percent.

In addition, the study also broke the conditions down into twenty-two major classifications of disease and listed their distribution by age and sex of patient.

This impressive amount of raw data collected by Drs. Marsland, Wood, and Mayo is important for a number of reasons, indicates the journal's editor, Dr. John P. Geyman, of Davis, California. Until the MCV study, he states "there has been little research in primary care in North America despite the fact that 90 to 95 percent of all doctor-patient contacts occur at this level. . . . Most of our medical literature," continued Dr. Geyman in his introductory article, "has been derived from the study of patients admitted to university hospitals, which represent only one out of 250 patients seen by physicians. . . ."

Until recently research in family practice has been limited, he explained, by such things as the lack of effective research tools and the absence of family practice departments in medical schools, a situation that has been changing since 1969 when the American Medical Association accorded family practice full specialty status.

Dr. Geyman noted that "the Virginia study serves as a landmark for the continued development of research as an essential element in better defining the academic discipline of family medicine, developing

more relevant teaching programs, and improving clinical approaches in family practice." He suggested that similar studies should be conducted elsewhere in North America to help further define family practice.

Three other experts assessed the clinical, educational, and research implications of the MCV study. Dr. William L. Stewart, chairman of the Department of Family Practice at Southern Illinois University, discussed the clinical implications for practicing family physicians. "It is interesting," he said, "that the top 20 diagnoses contain a number of problems for which we have specific therapy, such as hypertension, arteriosclerotic cardiovascular disease [heart and blood vessel disease], etc. However, we still have a long way to go in their prevention."

Dr. Stewart also wondered "what effect the control of the ninth-ranked problem, obesity, would have on the incidence of some of the other top 20 problems, e.g., hypertension, diabetes mellitus, and arteriosclerotic cardiovascular disease."

He also noted that the Virginia researchers had found that two-thirds of all patient visits were made by females. In older age groups the percentage was even higher. "It is tempting to speculate," wrote Dr. Stewart, "as to whether or not this has anything to do with the greater life expectancy of females in our population. I do believe that it points out a need for a greater emphasis on preventive medicine in our male population."

Two completely preventable diseases, rubella (German measles) and rubeola (measles), showed up in the data as 131 visits to physicians over the two years. Stewart indicated that this might signal the need for increased immunization efforts.

Almost 400 visits were for cancer of the lung and trachea. "Since there is a direct effect between smoking and these neoplasms [tumors]" stated Dr. Stewart, "it would imply that greater emphasis is needed in the area of getting people to stop smoking."

Cancer of the colon in females totaled a surprising 133 cases while there were 35 in males. Most other studies on this disease have shown an almost one-to-one ratio. The Virginia study showed that the vast majority of colon cancer in women occurred after age forty-five. According to Stewart, this might indicate a necessity for routine examinations of

the colon in women of this age group.

Commenting on the educational implications of the study, Dr. Keith Hodgkin, chairman of the Department of General Practice at the Memorial University of Newfoundland, characterized the research as "a valuable and significant study which will provide a basic reference for all teachers of medicine. . . . As the doctor of first contact," said Dr. Hodgkin, "the family physician must become a specialist in recognition and treatment of common diseases (i.e., those ranking in the first 23 Virginia categories) and in the early diagnosis of the rarer diseases which may be scattered through the whole range of the first 234 Virginia categories."

In an article on the research implications of the study, for the same magazine, Dr. I. R. McWhinney, chairman of the Department of Family Medicine at the University of Western Ontario, referred to the records of family physicians as a gold mine of information which is often buried and inaccessible. He stated that the MCV physicians "have now demonstrated a system which can be a fruitful source of clinical research."

It is this system of recording the gamut of health care problems evaluated by family physicians which will, no doubt, have the most far-reaching effects, long after the findings of this one survey—the first of its kind in the U.S.—are obscured by more sophisticated survey techniques and larger patient samplings.

One of the engineers of the system, Dr. Mayo, foresees "tremendous" implications for the techniques employed in this on-going study. "Now," he explains, "we can study any medical problem—be it biological, social, or behavioral—at its inception. We can study the natural history of disease in its early stages in a scientific way, and this was impossible before." Never before has there been a methodology, says Dr. Mayo, that "allowed us to look within a practice—for instance, at the hypertensives—and see what was really happening to this category of patients. . . . So, for the first time we can measure in a longitudinal way the outcome of care, which allows us to change the patient care system and measure the results of the change. This, of course, is the crux of the scientific method."

Did you know...

The budget gets tighter

"This is one of the tougher situations in my experience in public service," said Dr. T. Edward Temple humbly. Before becoming president of VCU ten months earlier, he had faced his share of tough situations—as a city manager, as the head of a state agency, and as the top administrator in state government. Now he was telling the faculty that the university faced an "extremely tight budget."

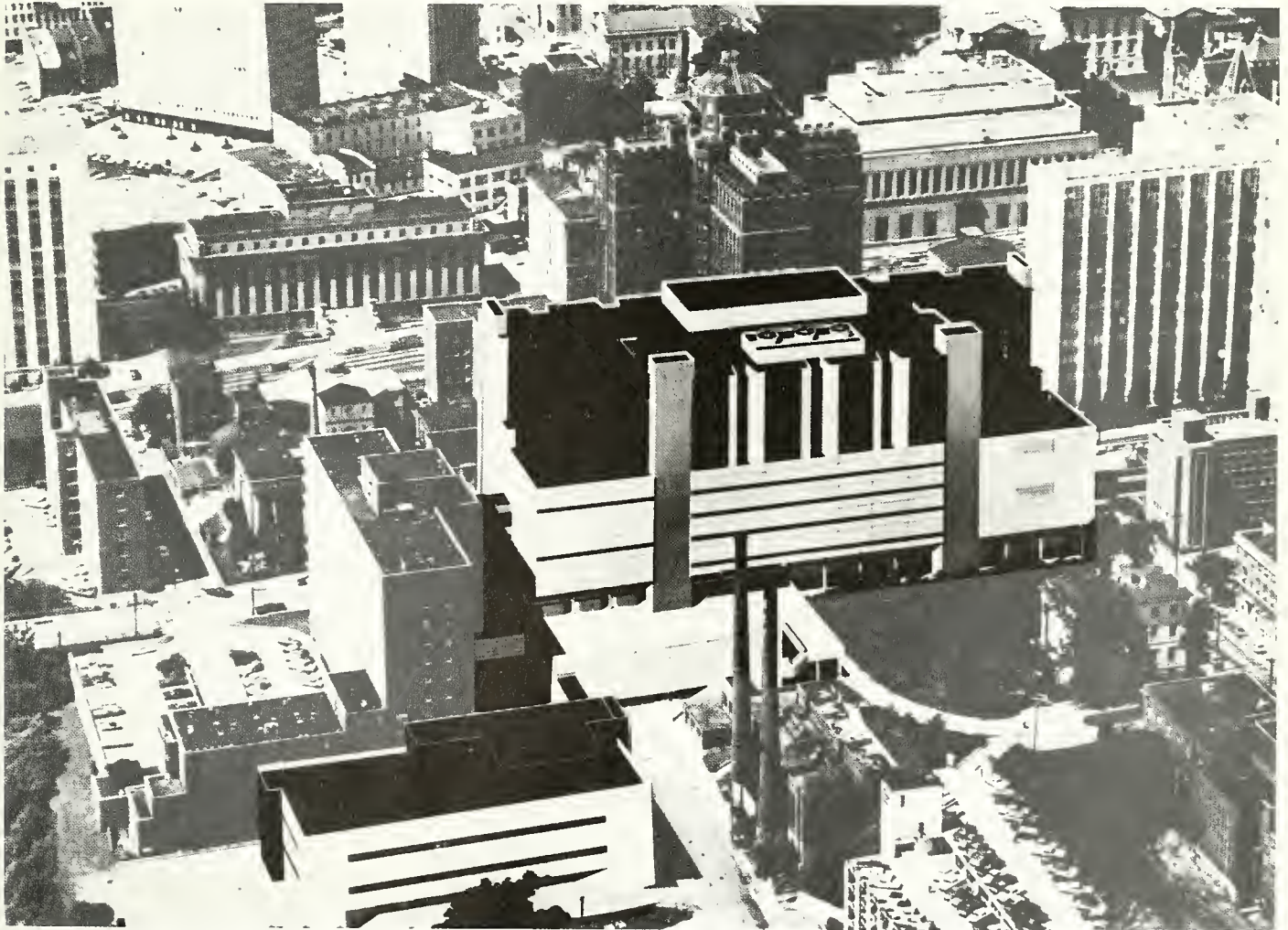
His audience had already known that the message would be gloomy. Four weeks before, the General Assembly had adopted an austerity budget, appropriating \$17 million less than Temple and his colleagues had

requested for university operations during the 1976-78 biennium. Now that administrators had had a chance to analyze the university's allocations two principal questions loomed in faculty minds: would there be pay raises for faculty? and would there have to be additional tuition increases for students?

Early in his budget presentation President Temple assured the faculty that salaries would not be cut. In fact, he announced that "there will be modest faculty salary increases, based on merit." He went on to explain, though, that "no set percentage increase has been adopted" and the increases will be "limited by the availability of funds, not by university choice."

The president also said that there will be a one-step regrade July 1 for the university's classified staff: custodians, secretaries, nurses, accountants, and the like. The legislature had authorized the 4.8 percent pay increase for all of the state's classified employees.

As for tuition, the president indicated that the only increases will be those already announced—"unless external funding sources are altered." Even before the budget request went to the General Assembly, the university had planned to boost tuition an average of 6 percent on the academic campus and 8 percent on the MCV campus both years of the biennium. There will have to be further increases in room and board rates for residential



A 558-bed hospital and ancillary facilities will be built at MCV with \$100 million in revenue bonds authorized by the 1976 General Assembly. The new hospital will front Marshall Street, between Twelfth and Thirteenth streets. In this view looking south, the architect's rendering has been superimposed over a photograph of the MCV campus. The State Capitol is in the upper right corner.

students, the exact amounts to be determined later.

In order to live within the two-year \$104 million budget, the president announced that the total number of faculty and staff will remain the same and that some of the projected cost increases will have to be absorbed through turnovers and vacancies. (While staff and faculty positions are being held down, student enrollment will go up. Full-time enrollment for 1976-77 is expected to be 14,650, or 480 more students than in 1975-76.) Dr. Temple also said he was deferring implementation of his own administrative reorganization plan in order to cut expenses.

Although the cost of goods and services is expected to rise 7.8 percent during the next year, the university's operating budget of \$50.4 million for 1976-77 represents less than a 6 percent increase over appropriations for the year ending June 30. Actually, general funds, or those from tax dollars, will increase only 2.5 percent. Special funds, or those which the university collects itself from tuition, fees, and auxiliary enterprises, will go up almost 14 percent. During the second year of the biennium the appropriation is \$53.1 million, or 5 percent more than the first year's. This represents increases of 4 percent in general funds and 8 percent in special funds.

In his comments to the faculty Temple outlined several legislative decisions which influenced the outcome of the budget. First of all, the legislature imposed a requirement that students must bear up to 30 percent of the educational costs of all programs, other than medicine and dentistry. Temple noted that this decision has different impacts on the state's universities. "I believe the premise for the decision was that any institution below 30 percent was at an advantage. The truth is, however, that the standard disregards the cost implications of graduate and professional programs, which are considerably more expensive than undergraduate programs."

The legislature also made no provision for alleviating library deficiencies in books and periodicals or for replacing part-time teachers with full-time faculty.

On the brighter side of the financial picture, the General Assembly did authorize the issuance of \$100 million in revenue bonds for construction of a 558-bed hospital and ancillary facilities, equipment, and renovations

on the MCV campus. Also approved was the purchase and renovation of the Richmond Eye Hospital. The eye hospital, to be bought with revenue bonds, sits across the street from the new hospital site. A new physical plant facility to serve the health sciences division was also funded.

Requests for capital outlay projects on the academic campus generally did not fare as well before lawmakers. The university had given top priority to the construction of an instructional building to house the departments of music and drama. Funding for the \$4 million project, however, was tied to the governor's recommended \$97 million tax package, which legislators refused to adopt. Although the university had asked for money to renovate old townhouses and buildings on both campuses, the legislature appropriated only enough to bring certain facilities up to the minimum safety standards of the Occupational Safety and Health Act (OSHA). The legislature did approve revenue bond financing for construction of a new 500-student dormitory to be built on a site overlooking Monroe Park.

In addition to the music-drama building, another casualty of fiscal restraint was a health sciences building for the MCV campus. The proposed \$15 million facility would house the pharmacology department, as well as the schools of nursing, pharmacy, and allied health professions.

President Temple is hopeful, however, that Governor Godwin will re-submit a capital outlay budget to the next session of the General Assembly. Whether lawmakers will approve the building projects when they convene again in January remains to be seen. If not, the 1978 session will certainly have to face up to the university's pressing needs—needs which President Temple says will not go away.

Some bills of interest

A number of measures approved by the 1976 General Assembly have either direct or indirect bearing upon activities at Virginia Commonwealth University. Below are listed some of the more notable actions.

The State Council of Higher Education is to develop an agreement to promote the orderly transfer of credits between community colleges and public senior colleges.

The State Council of Higher Education also is to assess the feasibility of establishing a regional school of op-

tometry in Virginia; its findings are to be reported by January 1, 1977.

Funds were provided for ten medical scholarships at Eastern Virginia Medical School. These are in addition to the sixty now designated for MCV/VCU and the University of Virginia. The state health commissioner may transfer unused funds among the three institutions.

The Standards of Quality were amended to include a provision for a five-year teacher preparation program to be implemented in 1981-82.

The state divisions of drug abuse control and alcohol rehabilitation were merged into one administrative unit in the Virginia Department of Mental Health and Mental Retardation.

Two controversial measures affecting the university were approved in the House of Delegates before being defeated in the Senate. Efforts to include boards of visitors at state colleges and universities under the Freedom of Information Act failed. The proposed amendment to the act would have opened meetings of the boards to the public. VCU's Board of Visitors maintained a neutral position on this issue.

Also defeated was a resolution which would have requested each state college and university to make plans for adequate on-campus housing and to assist students in finding suitable off-campus living quarters.

Several important proposals were carried over until the next legislative session. Action was postponed on bills which would authorize the collective bargaining of public employees, including faculty and staff at state supported institutions of higher learning. Also delayed was a decision on a measure which would prohibit the levying of student activity fees at state colleges and universities without student approval in a referendum in which at least 40 percent of the enrollment voted.

A bill authorizing the Board of Medical Examiners to develop rules and regulations regarding continuing education standards for license renewal of certain health professions, including medicine and physical therapy, was held for a vote until the 1977 legislature convenes.

Head injury center

A center to treat and study brain injuries, the leading cause of accidental death and severe disability among

young adults, has been established at MCV. It is one of only five such centers in the nation, and recently it received a three-year grant of \$1.2 million from the National Institutes of Health.

Automobile accidents, explains Dr. Donald P. Becker, chairman of the MCV division of neurosurgery and principal researcher, are the leading cause of head injury. Other chief causes are construction mishaps, motorcycle crashes, and violent crime.

Basically, the Clinical Head Injury Center will employ and evaluate various techniques to diagnose, monitor, and treat severe head injuries.

Rx for pharmacists

A doctor of pharmacy degree will be offered through the School of Pharmacy at MCV, beginning in September. The two-year program, approved by the State Council of Higher Education in 1975, will accept eight to ten students in its first year.

Dr. James M. McKenney, assistant professor of pharmacy, has been named director of the doctorate program. Dr. McKenney earned his B.S. degree in pharmacy from MCV in 1968 and his doctorate in pharmacy from Wayne State University in 1972.

The state's only pharmacy school is located at MCV, and its new doctorate program is the twenty-second such degree program in the U. S.

Alumni accolade

May graduate Tina G. Sokol received the 1976 Alumni Award, the highest honor given a senior attending VCU's academic division. The annual award, sponsored by the VCU Alumni Association (Academic Division), was presented at the honors and awards convocation on April 4 by Marshall E. Murdaugh, vice-president of the alumni association and commissioner of the Virginia State Travel Service.

Ms. Sokol, of Virginia Beach, graduated May 15 with a B.S. degree in juvenile justice. After attending Virginia Tech for two years, she transferred to VCU, where she was a dean's list student and was selected for *Who's Who Among Students in American Universities and Colleges*. She has served as a volunteer juvenile probation officer and was coordinator of the VCU component of the volunteer probation program offered through the Richmond Juvenile and

Domestic Relations Court.

Murdaugh presented Ms. Sokol with a silver Revere bowl. The award was one of more than 300 presented during the university-wide ceremonies recognizing student achievements in scholarship, leadership, and service.

It's no small wonder

Almost one half of the university's operating budget is spent for patient care and educational programs at MCV Hospitals. In 1974-75, according to President T. Edward Temple, the hospital budget was \$49 million, or a "little less than 50 percent of the total university budget" of \$103 million. "It is no small wonder," said Temple, "that university presidents are paying more attention to what is happening in that hospital setting."

Temple made those remarks in an address to alumni of the Department of Hospital and Health Administration. The occasion was the fourth annual Cardwell Lecture, held each February in Chicago during a meeting of the American College of Hospital Administrators. The lecture honors Charles P. Cardwell, Jr., professor emeritus and founder of the department of hospital administration at MCV.

During his speech President Temple discussed the issues facing university teaching hospitals and MCV/VCU's response to those issues. One of the basic concerns, he cited, is balancing "the teaching hospital's educational and research aims with its increasing responsibility to the community for patient care." Temple contends "that the primary function of the hospital, any hospital, is the care of the patient and that the environment or the attitude of the hospital must be of giving to the patient today.

"If the hospital places teaching and research as its primary function, the budget, space, and admitting policies are all geared selectively to this end. Tomorrow's patient may well benefit, but today's atmosphere is one of obtaining knowledge, perhaps to the detriment of other functions."

The president also briefed his alumni audience on MCV Hospitals "as it exists today within one of the nation's largest academic health science centers." Last year, he pointed out, the hospitals admitted 33,000 patients and provided 260,000 days of care.



Dr. Hibbs

The History of RPI

"No doubt, RPI and VCU alumni . . . will find a number of things to interest them in this book. . . . No one today is better prepared to write RPI's story than is Dr. Hibbs, the institution's leader for thirty-four years. It was he who planned the unpretentious school in 1917, and it was he who oversaw its every move and every change until the time of his retirement."

*—Maurice Duke, book editor
Richmond Times-Dispatch*

Now available, this narrative and pictorial history of a unique institution by its first administrator. *A History of Richmond Professional Institute*, by Dr. Henry H. Hibbs, is published by the RPI Foundation and is available exclusively through the Alumni Activities Office, Virginia Commonwealth University, Richmond, Virginia 23284. The price of the book is \$12.50. Checks should be made payable to Virginia Commonwealth University.

Sports

Unlucky thirteen

Thirteen points. That's all that kept VCU's basketball team from chalking up twenty victories instead of the actual sixteen. The Rams lost to Georgia State by one point, to nationally ranked Centenary by four, and to the University of Richmond twice—first by six and then by two points. Were it not for the thirteen point difference, the Rams might have ended the season with twenty wins and five losses instead of their sixteen and nine record. The wishful even like to think that the unlucky thirteen barred VCU from a berth in either the NCAA or NIT postseason tournaments.

"It was that close," said Coach Chuck Noe, "and when you remember that we had a young team this year, you can see what might have been."

The highlight of the Rams' third season in major college competition was the victory over Michigan State in the championship game of the Lions-VCU Holiday Tournament at the Richmond Coliseum last December. Equally important was the signing of home-and-home agreements with the University of Richmond. The series opened what is expected to develop into some of the keenest basketball competition in the state.

On March 4, the final home game of the 1975-76 season, the Rams said farewell to two seniors, cocaptains Tom Motley and Keith Highsmith. Each was presented an engraved plaque in recognition of his leadership and contribution to the growth of VCU basketball.

Motley finished the year with an average of 18.4 points per game (ppg) and 8.5 rebounds per game (rpg). He scored in double figures in all but four games and rebounded in double figures nine times. In his next to last game, Motley scored a career high of 33 points over Centenary, giving him a career total of 1,180 points.

Highsmith averaged thirty minutes of play per game, second to Motley's thirty-one, and averaged 6.5 points. As a playmaker he registered 150 assists, or 6 per game.

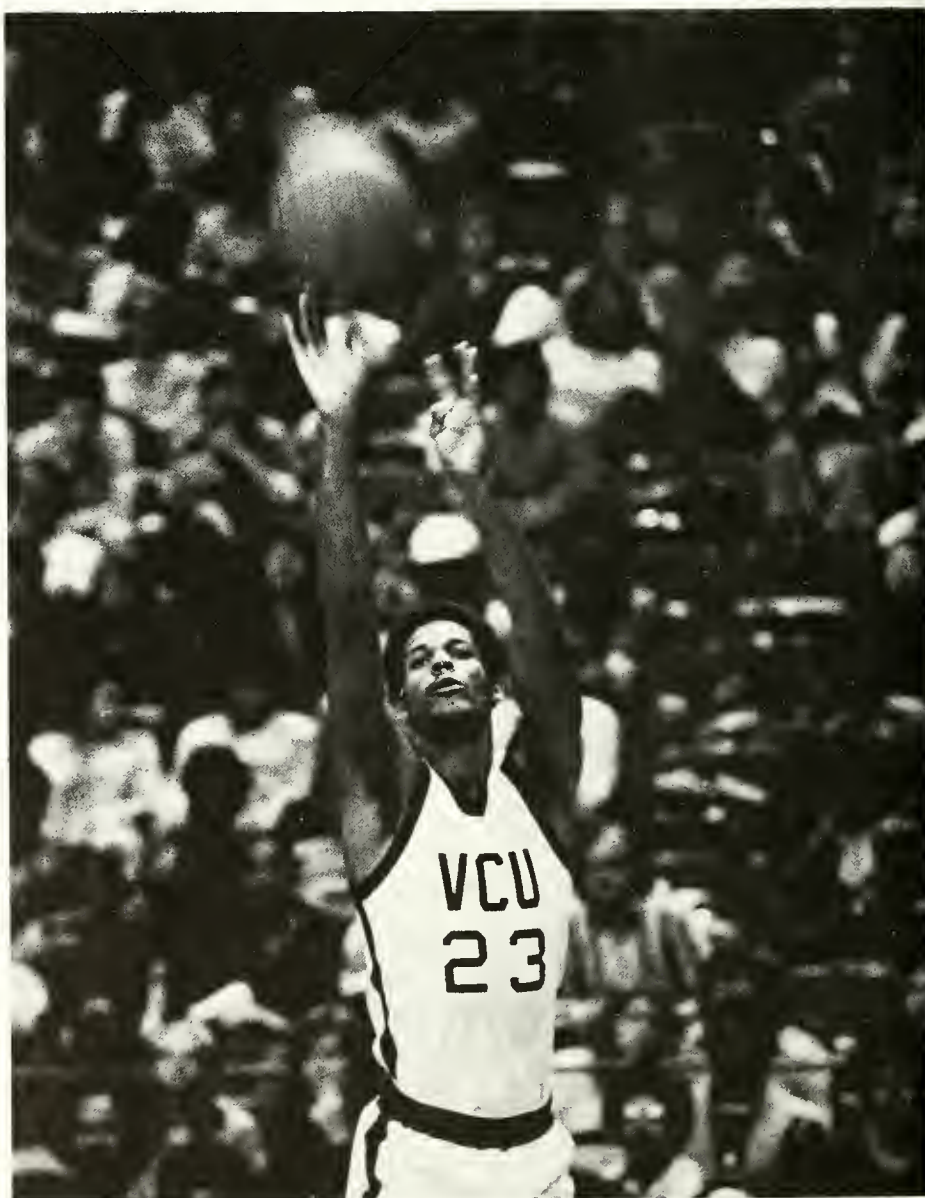
Two first-year men played key roles during the 1975-76 season. Norman

Barnes, a 6'8" transfer, and Lorenza Watson, a 6'9" freshman, both saw action at the center position. Each shot over 50 percent from the field. Watson saw more action, especially late in the year. He pulled down 18 rebounds against Bentley College, his sixth double-figure game on the boards. His 7.5 rpg was second only to Motley's.

Gerald Henderson joined Motley in hitting in double figures in twenty-one of the twenty-five games. The 6'3" sophomore averaged 16.8 ppg and had a game high of 34 points against the University of Buffalo.

Only a 7 of 17 performance from the floor in the final game against Bentley pulled him below a 50 percent shooting average for the season.

Other key Rams were Tic Price (whose two free throws sent the game at Brockport, N.Y., into overtime), Tim Binns, and Edd Tatum. Price finished with 12.8 ppg and 5.4 rpg; he scored in double figures the last five games (14.2 ppg). Binns had several good games, topped by his 22 points against City College of New York (CCNY) in the holiday tournament. Tatum did well coming off the bench several times during the season.



Forward "Tic" Price, a sophomore, averaged better than twelve points per game.



Cocaptain Patty Dillon's butterfly helped the women's swim team win the state championship.

Games scheduled for next year include home-and-home series with Richmond and East Carolina, a home date with Auburn, and road games with Tulsa, Oral Roberts, Louisville, and Boston University. Clearly, the highlight of the 1976-77 season will be the *Richmond Times-Dispatch* Invitational Tournament December 29-30, 1976, at the Richmond Coliseum. The newspaper-sponsored tournament matches Virginia's four major college teams: VCU, University of Virginia, Virginia Tech, and University of Richmond. In the first round, VCU will meet for the first time the University of Virginia, winner of the 1976 Atlantic Coast Conference tournament.

Slippery Slippery Rock

Although the wrestling team closed the season with only one win, nine losses, and one tie, two VCU grapplers did qualify for the NCAA eastern regional in Cleveland.

Gary Hicks, a 126-pounder, was pinned by Dennis Goldberg, of Indiana State, who was rated third in the nation. Rick Thompson, of Slippery Rock State College, slipped by Carleton Wimberly, a 134-pounder. Thompson was top-seeded in his division.

"Both men did very well," said Coach Tom Legge, "and made it to the consolation semifinals." Thirty-three schools competed in the regional.

Spiders get soaked

The VCU men's swim team garnered

every swimming honor in Virginia during the final meet at VMI in Lexington. The team was crowned state champion. VCU's Robert Johnson was named the meet's outstanding swimmer. And Coach Ron Tsuchiya was chosen coach of the year for the third consecutive time.

The Rams soaked up 474 points for the title, against 361 for the second-place University of Richmond Spiders. Virginia Tech was third with 305.

Johnson set state records in the 100-, 200-, and 500-yard freestyle events. He also swam legs of both the 400- and 800-yard freestyle relays, both of which established state records. Win Hunter gave VCU another state mark when he finished first in the 200-yard backstroke.

Aquatics and volleys

Women's teams from VCU won state championships in both swimming and volleyball, while the basketball and field hockey teams also made respectable showings.

The well-balanced swim team compiled a fifty-nine to one record in dual meets, earned the state title, and sent six swimmers to the AIAW national finals. Cocaptains Julie Mejeur and Patty Dillon, along with Sharon Powell, Debbie Sunkel, Joyce Barton, and Suzanne Garcia, competed against the best female swimmers in the U.S. at Ft. Lauderdale last March. The competition, however, was extremely tough, and the VCU swimmers failed to score any points.

The volleyball team, led by Coach Judy Newcombe, tallied twenty-six wins and five losses in its third year of

play. VCU whipped powerful VPI and Madison, went undefeated in the regular season, and won the state tourney as well. Its impressive record also earned the team an invitation to play in the AIAW regionals at Memphis State, where it finished fourth.

Injuries slowed the early performance of the women's basketball team, but the girls rebounded during the second semester to earn a respectable finish in the state tournament. The team's record of ten wins and seven losses ranked them eighth in the nine-team tournament. By virtue of their standing, the team drew top-seeded Madison College as its first opponent.

"We were up by one point with forty-eight seconds to go," said Coach Williett Mullican, "but we ended up losing by three points." Encouraged by that showing, the women went into the consolation bracket and bounced to a fifth-place finish. Mary Skinner, VCU's top scorer, won the plaudits of tournament leaders and was named to the all-state team.

Field hockey, a relatively new sport for women at VCU, posted a season record of two wins, five losses, and three ties. In the Tidewater Field Hockey Tournament, hosted by VCU, the girls beat Longwood College before losing to William and Mary, winners of the tournament. In the consolation round, the VCU team clubbed its way to a third place finish. The tourney's first and second place teams, William and Mary and Longwood, went to the national tournament and finished fourth and sixth in the U.S.

Whatever happened to...

If you take a new job, get a promotion, earn another degree, receive an honor, or decide to retire, share the news with us, and we will pass it along to your classmates via the "Whatever happened to..." section. Please address newsworthy items to Editor, VCU Magazine, Virginia Commonwealth University, Richmond, Virginia 23284.

1920s

Harry Lyons (D.D.S. '23), dean emeritus of the School of Dentistry at MCV, was one of seven dental health leaders to be honored by the American Fund for Dental Health on February 15 in Chicago. Dr. Lyons, who retired as dean of the dental school in 1970, helped to establish the fund twenty years ago. He is still active in the affairs of the university, serving as a special assistant for development at VCU.

1940s

Carolyn Moore McCue (M.D. '41) is chairman of the board of trustees of the Richmond Academy of Medicine. She is professor of pediatrics at MCV. Her husband, **Howard M. McCue, Jr.** (M.D. '41), is also on the faculty at MCV as associate clinical professor of medicine.

Elsie Harrison Blanton (B.S., nursing RPI '42; M.S., rehabilitation counseling '69) is chief nurse for the state health department in Virginia.

Raymond S. Brown (B.S., pharmacy '42; M.D. '45) is president of the Medical Society of Virginia, a professional organization composed of 5,000 doctors. In addition to maintaining his practice in Gloucester, Dr. Brown shuttled between his home and Richmond to testify in support of measures before the 1976 General Assembly that were backed by the medical society.

Charles M. Zacharias (M.D. '47) is first vice-president of the Richmond Academy of Medicine. He has a practice in internal medicine.

Nash H. Underwood (D.D.S. '48), of Wake Forest, N.C., represented VCU at the inauguration of the new president of Southeastern Baptist Theological Seminary. The seminary is located in Wake Forest.

Thelma Perry Walker (nursing '48), maternal and child health nurse consultant for the state health department in Alabama, has been appointed by HEW Secretary, Dr. David Matthews, to serve on the Health Insurance Benefits Advisory Council. The council advises the secretary on policy matters related to Medicare and Medicaid. Mrs. Walker attended

the St. Philip School of Nursing, which closed in 1962. Alumni of the school are now affiliated with the MCV/VCU Nursing Alumni Association.

Robert Watkins (B.F.A., drama '48; M.F.A. '50) is director of the newly formed Concert Ballet of Virginia. For two decades Watkins, former artistic director of the Richmond Ballet, has produced outstanding seasons of classical dance in Richmond and, more recently, throughout the state.

1950s

Robert N. Adams (B.F.A., art '52) is a minister at Kansas City Baptist Temple. He lives in Raytown, Mo.

Joseph J. Centrone (B.M., music education '52) heads the music department at Lafayette Central School in Lafayette, N.Y.

Nannette Lorraine Beavers (B.F.A., art education '53) lives in Norfolk, where she works as a free-lance artist.

John W. Attkisson (B.S., business '54) works for the Life Insurance Company of Virginia as district group manager in the employee benefits program. Last year he was responsible for more than \$450,000 in new group insurance and pension programs. In recognition of his work, he received a "Sammy" award from the Richmond Sales and Marketing Executives organization, which annually honors outstanding professional salespersons.

Roy M. (Don) Carter (B.F.A. '54; M.F.A. '59) is director of the department of art for the city of Arvada, Colo.

Charles E. Mahon (B.S., journalism '54) has completed his eleventh year as editor of the weekly *Catholic Virginian*, the Richmond diocesan newspaper. His wife, **Marian Gately Mahon** (B.S., journalism '54), continues in her position as public relations director for the Richmond chapter of the American Red Cross. She is also currently serving as president of the Richmond Public Relations Association.

Betty Wheeler Evans Burke (B.F.A., commercial art '55) is teaching art history in Norfolk. She lives in Virginia Beach.

Samuel W. Crickenberger (B.S., pharmacy '57) has been appointed executive director of the Virginia Pharmaceutical Association. He has practiced pharmacy since 1957, most recently as owner-operator of Chancellor's Drug in Charlottesville.

Robert Earl Elvington (D.D.S. '57), of Nichols, S.C., has been elected to the board of directors of Davis National Bank in Mullins, S.C.

Percy Wootton (M.D. '57), a cardiologist, is president of the Richmond

Academy of Medicine. He is a clinical instructor in medicine at MCV and is married to **Jane Pendleton Wootton** (M.D. '65).

R. Stanford England (B.S., business '58), district woodlands controller for Continental Can Company, has been elected to the Hopewell, Va., board of First and Merchants Bank.

Mansfield M. Elmore (B.S., social science '59; M.S., rehabilitation counseling '68), of Pinehurst, N.C., is director of the Sandhills Mental Health Clinic.

Robert Lee Masden (B.S., business '59) is Virginia's new employment commissioner. He was appointed by Governor Mills E. Godwin, Jr., to head the state agency responsible for unemployment compensation and job placements. Prior to his assuming the post on April 1, Masden was deputy state commissioner of welfare. He entered state service as a staff lawyer for the Virginia Advisory Legislative Counsel fourteen years ago.

Gail F. Neal (B.S., physical therapy '59) is chairwoman of the 1976 fund drive for the Virginia division of the American Cancer Society. As crusade chairwoman, she will lead more than 85,000 volunteers around the state in their efforts to raise \$2 million. Mrs. Neal is the wife of Dr. M. Pinson Neal, Jr., provost at MCV.

Betty Reames (M.S., social work '59) is the new executive director of Memorial Guidance Clinic in Richmond. The clinic, supported by the United Way and the State Department of Mental Health and Mental Retardation, helps emotionally disturbed children.

1960s

Grace E. Harris (M.S., social work '60), assistant professor of social work at VCU, served as chairperson of the social services section at the annual meeting of the Alpha Kappa Delta Sociology Symposium held in Richmond and sponsored by VCU's sociology department.

Nelda Bruffee Roehm (B.S., psychology '60; M.S., rehabilitation counseling '61) is national secretary for the Arkansas Osteogenesis Imperfecta Foundation. She lives in Hot Springs, Ark.

James R. Wickham (M.D. '60) is second vice-president of the Richmond Academy of Medicine. He is a clinical instructor in medicine at MCV.

Kenneth H. Axtell (M.H.A., '61) has been named administrator of the Williamsburg (Va.) Community Hospital. Prior to his appointment, he was associate administrator of Memorial Hospital in Danville, Va.

Mona L. Pfeffer (B.S., nursing '61) has

been named assistant director of evening nursing service at Warren Memorial Hospital at Front Royal, Va. Miss Pepper, who has worked at the hospital since 1961, has been evening supervisor for the past fifteen years.

James D. Gillespe (B.F.A., commercial art '62) won a certificate of distinction for his design of the Reynolds Metal Company's annual report in the Virginia Museum's biennial designer show. Gillespe lives in Richmond.

Irene Glover (B.F.A., art education '62), a potter, has established a thriving business in her hometown of Washington, N.C. She makes functional pieces of colorful stoneware in her studio, which is located on a 500-acre farm. Miss Glover started the business five years ago after receiving her master's degree in ceramics from East Carolina University and working as an art teacher. She returned to Richmond in February to speak to a local woman's club.

Wilbert A. Keys (B.F.A., drama '62), staging director for the Richmond Civic Opera, taught a course entitled "Opera: Heard But Not Seen," through VCU's Center for Continuing Education. The noncredit course was offered during the spring semester to enhance the listening enjoyment of radio broadcasts from New York's Metropolitan Opera.

H. George White, Jr. (M.D. '62), an orthopedic surgeon in Winchester, Va., is a member of the attending staff at Winchester Memorial Hospital and is secretary-treasurer of the Medical Society of Northern Virginia. He is also assisting in the annual fund drive at Shenandoah College and Conservatory of Music by serving as chairman of the medical professions committee.

Walter McGhee (B.F.A., dramatic art and speech '64) is public program director for Central Virginia Educational Television, WCVE, Channel 23 in Richmond.

James R. Booth (M.S., rehabilitation counseling '65) is an instructor in counseling at the University of Oregon. He lives in Dexter, Ore.

William E. Gayle, Jr. (M.D. '65), assistant professor of surgery at MCV, discussed "Trauma—Sprains, Strains, Lacerations, Amputations, Contusions and Abrasions" with physicians at the Southside Community Hospital in Farmville, Va., on February 4. His lecture was sponsored by the continuing education program of the MCV School of Medicine and the MCV Cancer Center.

John T. Hardy, Jr. (B.S., applied psychology '65) received his M.A. degree in political science with a certificate in urban studies from the University of Florida in March. Major Hardy presently is teaching Army ROTC at the University of Florida in Gainesville.

Wayne M. Hague (B.S., pharmacy '66) has opened a new pharmacy in Gordonsville, Va. He moved his business from Gordonsville Hospital to his new store on Main Street. Hague serves on the

board of directors of Virginia National Bank in Gordonsville.

Jerald B. Hubbard (B.S., sociology and social welfare '66) is the new principal of Franklin County (Va.) High School. Prior to his appointment, he was principal of an elementary school in the county. He earned his master's degree in education from the University of Virginia.

Priscilla Alden Rappolt (B.F.A., art education '66; M.F.A., fine arts '68) teaches art for the Virginia Museum chapter in Charlottesville.

Ronald Rose (B.F.A., art education '66; M.F.A., fine arts '68), a painter, and his wife, **Frances Baker Rose** (B.F.A., art history '64), a photographer, exhibited their works in a joint show at the Scott-McKinnis Fine Art gallery in Richmond last March. The couple operates a small commercial graphics business in Richmond.

Roberta Wyatt Rice (B.F.A., art education '67; M.A., art history '72) is completing a doctoral degree at Pennsylvania State University.

Suzanne Alison Wyman (B.S., sociology '67; M.S., rehabilitation counseling '69) is assistant professor of counselor education at Old Dominion University in Norfolk.

James L. Antonick (B.A., history '68; M.S., rehabilitation counseling '74) is director of placement at Tidewater Community College. He lives in Virginia Beach.

Lucille Blumenkranz Coopersmith (M.S., rehabilitation counseling '68) now lives in Flagstaff, Ariz., where she is a public health nurse with the Indian Health Service.

Dennis M. O'Toole (M.S., business '68), associate professor of economics at VCU, is executive vice-president of the Virginia Council on Economic Education.

David R. White (B.S., advertising '68) has recently had two portfolios of his photographs accepted for exhibition at the Neikrug Gallery of Photography in New York City. White lives in Richmond, where he is a free-lance photographer.

Doug M. Apperson (business '69) has been promoted to principal construction procurement specialist by Carolina Power and Light Company. He lives in Cary, N.C.

Thomas E. Baker (A.S., law enforcement '69; social welfare '70), an assistant professor of sociology and law enforcement at the University of Scranton, recently accepted a commission as a warrant officer in the Army Reserves. His wife, **Jane Piland Baker** (B.S., elementary education '74), is a graduate student in the Department of Counselor Education at the University of Scranton. They live in Moscow, Pa.

Robert R. Ford, Jr. (B.M., piano '69), organist-choirmaster of Chamberlayne Heights United Methodist Church in Richmond, was a guest performer for a program of noontime music at Christ Episcopal Church, also in Richmond. Ford

is an Army veteran and served as an organist for Protestant services at a base in South Korea.

Thomas E. Gilreath, Jr. (B.F.A., interior design '69) is a senior designer with Miller and Rhoads's interior design studio at Regency Square in Richmond. He holds an associate membership in the American Society of Interior Designers.

Barrie L. Jones (B.S., business management '69) has been named director of public relations for the Richmond office of Public Relations Institute, a division of Lawler Ballard Little Advertising Agency. Jones joined the firm in 1974 as an account executive, following completion of a master's degree in public relations at Boston University.

Donna Sanford (B.A., history '69) directed an award-winning program entitled "Phil Coxon: Musician" for Central Virginia Educational Television. The twenty-minute instructional tape won an award for meritorious achievement in educational broadcasting from the Institute for Education by Radio-Television.

A. Daniel Thomas, Jr. (B.F.A., communication arts and design '70) received a certificate of distinction in the Virginia Museum's biennial designers show. Thomas, who is art director at Brand, Edmonds and Bolio, won the citation for a series of poster designs. He and his wife, **Darryl Hagan Thomas** (B.F.A., painting and printmaking '70), live in Richmond.

1970s

Joseph M. Essex (B.F.A., communication arts and design '70) is a graphic designer with Container Corporation of America. He was a winner in the annual design competition sponsored by the *International Journal of Typographics*. He and his wife, **Judith Bock Essex** (B.F.A., art education '69), live in Chicago.

Pedro Gonzalez (B.F.A., communication arts and design '70) received a certificate of distinction in the Virginia Museum's designers biennial show. His winning entry was the letterhead for his Washington, D. C., based design firm, Assemblage. He and his wife, **Jo Dee Hayes Gonzalez** (B.F.A., interior design '70), live in Alexandria, Va.

Karen Grollman (B.S., advertising '70) received a bachelor's degree in accounting from Florida Technological University in Orlando last year. She now works in accounting at the Kennedy Space Center and lives at Merritt Island, Fla.

Raynor Johnston (B.F.A., dramatic art and speech '70) is an actor and lives in Hollywood, Calif., where he has appeared in productions of *Richard III*, *Hamlet*, and *Cyrano de Bergerac* at the Globe Playhouse. His film credits include *The Last Detail*, *The Pioneer Experience*, and *The First Nudie Musical*. Johnston's stage name is Raynor Scheine.

Charles A. McAleer (M.S., clinical psychology '70), of Dallas, is teaching at

the University of Texas, where he is assistant professor of rehabilitation counseling.

Billy R. Montgomery (M.S., rehabilitation counseling '70) is president of the Maryland Rehabilitation Association. He lives in Baltimore, where he is on the staff of the Division of Vocational Rehabilitation.

William S. Nelson, Jr. (B.F.A., communication arts and design '70), a freelance illustrator in Richmond, recently received awards for his illustrations in *New Times* magazine from the Society of Illustrators and the New York Art Director's Club.

F. Robert Belcher (B.F.A., interior design '71) lives in Madeira Beach, Fla., where he does commercial and residential interior design.

Ann Revere Bristow (B.S., psychology '71; M.S., clinical psychology '74) has joined the staff at Texas Christian University in Fort Worth as a psychologist and assistant professor in TCU's Center for Counseling and Psychological Services.

C. Brownie Harris (B.F.A., communication arts and design '71) is director of the photography department and staff photographer for the Educational Broadcasting Corporation, WNET/13, in New York City. WNET/New York is the network station for 240 PBS stations throughout the country. Recently, Harris was awarded a gold medal in an international photography show for a WNET/13 television commercial. The New York chapter of the National Academy of Television Arts and Sciences has nominated him for an outstanding individual craft award for animation photography. Harris also held a photography exhibit, which will be published in a forthcoming book.

Betty Massie (M.S.W. '71) is director of the group process program and psychiatric social worker at the Commonwealth Psychiatric Center in Richmond. Recently, she completed a two-year study program in group psychotherapy at the Washington (D.C.) School of Psychiatry. She is currently a Ph.D. candidate in a summer study program at the International Graduate University in Switzerland.

Elizabeth Moyer (M.S., occupational therapy '71), chief occupational therapist at Marcy Psychiatric Center in Utica, N. Y., is the author of a recently published book, *Self-Assessment of Current Knowledge in Occupational Therapy*. Published by the Medical Examination Publishing Company of Flushing, N. Y., the book is comprised of 1,035 multiple choice questions and fully referenced answers. It is specifically designed for practicing occupational therapists who want to improve or update their skills. Mrs. Moyer is a part-time assistant professor in the graduate program in occupational therapy at the State University of New York at Buffalo. She also serves as vice-president of the New York State Occupational Therapy Association.

Ronald B. Neely (B.S., law enforcement) is director of the Crater Criminal Justice Academy in Petersburg. The academy was started last year to train law enforcement personnel from the cities of Petersburg, Hopewell, Colonial Heights, and Emporia, and the counties of Sussex, Dinwiddie, Prince George, Surry, and Greenville. Neely served as a policeman in Richmond and worked in the state division of justice and crime prevention. He also has worked in military intelligence.

Mark Rissi (B.A., history '71), of Zurich, Switzerland, is a writer, cinematographer, and director of documentaries for the television network run by the Swiss government. He also is founder of Logos Films, a company which makes feature-length motion pictures.

Claude Skelton (B.F.A., communication arts and design '71) is a graphic designer with Wickham and Associates in Washington, D. C. He was featured in the *International Journal of Typographics* as a winner in its annual design competition.

Fred Stargardt (painting and printmaking '71) is a graphic artist and designer for Adcom of Falls Church, Va. He served in the U. S. Navy, where he did art work in a graphics shop for four years. Exhibitions of his fine art have been held in New York City and Paris.

Peter VanGraafeiland (B.S., business administration '71; M.S., business '72) has been promoted to vice-president of Branch Banking and Trust Company in Wilson, N.C. He joined the bank's mortgage loan department in 1973 and has been named manager of that department.

Neil E. Shields (M.H.A. '72) is staff assistant to the vice-president for operations of General Care Corporation in Nashville, Tenn. He formerly was administrator of John Randolph Hospital in Hopewell, Va.

Douglas Richard Stell (B.S., recreational leadership '72) is lead driver for Courier Express Corporation of Virginia. Mrs. Stell, née **Judith Anne Marshall** (B.S., recreational leadership '71), is an administrative assistant in the credit department of United Virginia Bank. The Stells live in Richmond.

Randy Strawderman (B.F.A., dramatic art and speech '72) has been appointed temporary guest director of the Richmond Ballet. Last summer he received a scholarship to study with the Joffrey Ballet in New York City. Strawderman, a former principal dancer and choreographer with the Richmond Ballet, has been living in Norfolk, where he has been working with the Norfolk Civic Ballet.

Paul D. Williams (M.H.A. '72) has been appointed an assistant professor in the Department of Hospital and Health Administration at MCV. He has more than twenty years of experience in the health care field.

Michael J. Eunice (M.S., business '73) has been named a vice-president of Central National Bank in Richmond. Eunice,

who joined the bank in 1970, is responsible for construction lending.

Jack L. Harris (B.S., social welfare '73) graduated in December from the University of Miami School of Law with a Juris Doctor degree.

Gerald E. Kilgore (business administration '73) is business director for Austin Brockenbrough and Associates, a consulting engineering firm in Richmond. Earlier this year he was named to the Henrico County School Board.

David J. Schwemer (M.S.W. '73) is the new executive director of the Northwestern Community Mental Health and Mental Retardation Services board, which serves Page, Shenandoah, Clarke, Warren, and Frederick counties and the city of Winchester.

Peter C. Sherertz (B.S., science '73), an adjunct faculty member at VCU, has been conducting research on the long term effects of the cancer-causing agent, aflatoxin, on American cockroaches. He has coauthored several articles relating to his research.

Robert A. Almond (B.S., business education '74) is teaching at Richmond's Maggie Walker High School.

Lee Bedell Armistead (M.S., business '74) is teaching at the Chesapeake Technical Center in Chesapeake, Va.

Diane Aronberg (B.S., business education '74) has completed her M.S. in business and is teaching at VCU.

Marion Meyer Brown (B.S., social welfare '74) and **Valerie Williams Umanoff** (B.S., social work '74), both licensed social work consultants, have found an unusual way to practice their skills part time. Unable to find part-time jobs as sociologists, the two Richmond mothers have been hired for the same full-time position and have cut their duties in half. During their year-and-a-half partnership, they have contracted with three different clients. Presently, each works twenty hours a week, dividing their time between a hospital and a nursing home.

Elizabeth Hanna (B.F.A., painting and printmaking '74), a counselor in the Upward Bound program at Dabney S. Lancaster Community College in Clifton Forge, Va., exhibited her paintings at the community college last February.

Louis Legum (M.S., psychology '74) completed the requirements for a doctoral degree in clinical psychology last December and was awarded the Ph.D. during commencement exercises at VCU on May 15. He now resides in Augusta, Maine.

Pauline A. Mitchell (B.S., mass communications '74) is public relations director for WCVE, Channel 23 in Richmond. The station is the educational channel serving central Virginia.

Alyce Musgrove (M.F.A., painting and printmaking '74) taught classes in children's basic art and adult beginning painting at the Fine Arts School of Petersburg this past spring.

Bernard R. Riley (M.M. '74), organist

and choirmaster at Christ Ascension Church in Richmond, presented an organ recital at St. James's Episcopal Church, also in Richmond, on January 4.

Brian M. Schnitzer (M.D. '74) recently completed his internship at the University of Kentucky Medical Center and is currently assigned to the staff of the Papago Indian Reservation at Sells, Ariz. His wife, **Bonnie Robertson Schnitzer** (B.S., nursing '72), is attending graduate school at the University of Arizona in Tucson.

Ricardo C. Springs (B.S., mathematics '74) is employed as a research economist by a consulting and research firm, Mathematica Policy Research, of Washington, D.C. He earned an M.A. degree in economics from the University of Maryland and resides in Columbia, Md., with his wife and daughter.

James Donald Thomas (M.S. rehabilitation counseling '74) has been appointed director of social services for Patrick County, Va. Prior to assuming his new duties in February, he worked as a rehabilitation counselor in Martinsville, Va.

Bruce A. Twyman (B.S., mass communications '74) is news director of WCVE, Central Virginia Educational Television, Channel 23 in Richmond.

Henry G. Baker (M.S., rehabilitation counseling '75), of Holland, Va., is employed as a rehabilitation counselor by the commonwealth of Virginia. He is also a Baptist minister.

Denise Ann Barrett (B.S., business education '75) is living in Norfolk, where she works as a secretary for Telecab Corporation.

Vernon Thomas Drinkwater, Jr. (B.S., recreation '75) is attending Old Dominion University, where he is working on a master's degree in public administration. He is living in Virginia Beach.

Henry Lowenstein (B.S., business administration '75) recently accepted a position as a management analyst with the Executive Office of the President, Office of Management and Budget/Office of Federal Procurement Policy in Washington, D.C. He is also completing work on an M.B.A. degree from George Washington University.

Dorris Sanders New (A.S., general secretarial '75) has been selected secretary of the year by the Old Dominion chapter of the National Secretaries Association. Mrs. New, secretary to Dr. Curtis J. Hall, dean of the School of Business at VCU, has also passed the certified professional secretary examination.

Patricia (Patsy) Ware Stockdon (B.F.A., interior design '75) is a senior designer with Miller & Rhoads's interior design studio in the Chesterfield Mall, Richmond.

Gary David Solowey (M.S.W. '75) now lives in Little Rock, Ark., where he is a civilian social worker in charge of the alcoholic program of the Little Rock Air Force Base.

Diplomas, Rings and such

Do you wish you had a class ring? Would you like a confirmation diploma from VCU? Or how about a campus water-

color? All of these items are available from the VCU Alumni Activities Office. Here are the details.



Campus watercolors

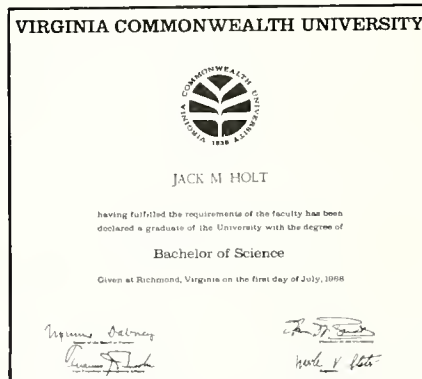
A limited number of 16" x 20" watercolor prints of the Egyptian Building on the MCV Campus and the Administration Building (the old Ginter Mansion) on the Academic Campus are still available. These limited-edition prints are individually signed reproductions of

paintings by Barclay Sheaks, a 1949 alumnus. Sheaks, who is one of Virginia's foremost artists, was commissioned by the Alumni Activities Office to execute only 250 copies of each of these lovely watercolors. The prints are \$25 apiece.



Class rings

Even if you failed to buy a class ring while you were a student, you can now order one through the Alumni Activities Office. Rings for both men and women are available in a wide variety of styles. For more information and a price list, write for a ring order kit and please specify whether the ring is for a man or a woman.



Confirmation diplomas

If you earned a degree (not a certificate) from the Richmond Professional Institute prior to its becoming Virginia Commonwealth University, you can get a confirmation diploma from VCU. Just write for an application form and return it along with \$10 to cover the cost of the new diploma.

For additional information about any of these items, please contact the Alumni Activities Office, Virginia Commonwealth University, Richmond, Virginia 23284, or telephone 804/770-7125. Checks should be made payable to Virginia Commonwealth University.

1976 Alumni Travel Program

VCU alumni have their choice of three exciting tours during the remainder of 1976. For the first time the Alumni Activities Office is sponsoring a visit to Hong Kong. And we're also repeating our popular trips to London and to Athens. Details of the travel plans are listed below.

Hong Kong The British Crown colony of Hong Kong, crossroads of the Orient, is your unique vacation spot for twelve days and ten nights, June 25-July 7, 1976. The surprising low price of \$599, plus a 15% tax and service charge, includes your round trip charter flight aboard a TransInternational Airlines DC-10, deluxe hotel accommodations, full-course breakfast daily, sightseeing, and many extras.

London The price of your eight-day visit to London is \$389, plus a 15% tax and service charge. This amount covers round trip jet transportation, accommodations in first class hotels, continental breakfast daily, and dinner four evenings on the dine-around plan. Dates for the first London tour are August 9-17, 1976. A second tour departs for London August 30 and returns September 7, 1976.

Athens The classic ruins of ancient Greece can be yours to behold on your tour to Athens, October 13-21, 1976. The cost of the tour is \$449, plus a 15% tax and service charge. The price includes round trip jet transportation, deluxe hotel accommodations, continental breakfast daily, gourmet dinner (or lunch) each evening, and tours of the Acropolis and the Athens Museum. All tours depart from Dulles International Airport near Washington, D.C., and are open to alumni, faculty, and staff of Virginia Commonwealth University and their immediate families. The price per person is based upon double occupancy. For information contact the Alumni Activities Office, Virginia Commonwealth University, Richmond, Virginia 23284, or telephone (804) 770-7125.



Suggested readings

The Bicentennial is not only a time for celebration, it also is a time for national introspection. We, therefore, are suggesting that all Americans devote a portion of their summer reading to some of the topics highlighted in this issue of VCU Magazine. Below are listed books which we think should prove to be thought provoking. These lists were compiled by the authors of our articles on Bicentennial America, future studies, and Buckminster Fuller.

For the Bicentennial

- Boorstin, Daniel J. *The Americans; the Democratic Experience*. Random House, 1973.
- . *The Americans; the National Experience*. Random House, 1965.
- Main, Jackson T. *The Social Structure of Revolutionary America*. Princeton University Press, 1965.
- Millis, Walter. *Arms and Men; a Study in American Military History*. G. P. Putnam's Sons, 1956.
- Pursell, Carrol, ed. *From Conservation to Ecology: the Development of Environmental Concern*. Thomas Y. Crowell, 1973.
- Smith, Henry Nash. *Virgin Land: the American West as Symbol and Myth*. Harvard University Press, 1950.
- Stevens, Rosemary. *American Medicine and the Public Interest*. Yale University Press, 1950.
- Strout, Cushing. *The New Heavens and the New Earth; Political Religion in America*. Harper and Row, 1954.
- Wood, Gordon. *The Creation of the American Republic*. University of North Carolina Press for the Institute of Early American History and Culture, 1969.
- Bell, Daniel. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. Basic books, 1973.
- . *Toward the Year 2000: Work in Progress*. Beacon Press, 1969.
- Best, Fred. *The Future of Work*. Prentice-Hall, 1973.
- Brown, Lester R. *World without Borders*. Random House, 1972.
- Chaplin, George, and Paige, Glenn D. *Hawaii 2000: Continuing Experiment in Anticipatory Democracy*. University Press of Hawaii, 1973.
- Conger, D. Stuart. *Social Inventions*. Saskatchewan New-Start (Canada), 1974.
- de Jouvenel, Bertrand. *The Art of Conjecture*. Basic Books, 1967.
- Erlich, Paul R., and Erlich, Anne H. *The End of Affluence: A Blueprint for Your Future*. Ballantine Books, 1974.
- Etzioni, Amitai. *Genetic Fix*. Macmillan, 1973.
- Feinberg, Gerald. *The Prometheus Project: Mankind's Search for Long-Range Goals*. Anchor Books, 1969.
- Ferkiss, Victor. *The Future of Technological Civilization*. George Braziller, 1974.
- . *Technological Man: The Myth and the Reality*. George Braziller, 1969.
- Francoeur, Robert T. *Eve's New Rib: Twenty Faces of Sex, Marriage, and Family*. Delta, 1973.
- Gray, Elizabeth and David Dodson, and Martin, William F. *Growth and Its Implications for the Future*. The Dinosaur Press, 1975.
- Heilbroner, Robert L. *Business Civilization in Decline*. W. W. Norton, 1976.
- . *An Inquiry into the Human Prospect*. W. W. Norton, 1974.
- Hellman, Hal. *Communications in the World of the Future*. M. Evans, 1975.
- Kahn, Herman. *The Future of the Corporation*. Mason and Lipscomb, 1974.
- Kahn, Herman, and Bruce-Briggs, B. *Things to Come: Thinking about the '70s and '80s*. Macmillan, 1972.
- Kinkade, Kathleen. *A Walden Two Experiment: The First Five Years of Twin Oaks Community*. William Morrow, 1972.
- McHale, John. *The Future of the Future*. George Braziller, 1971.
- . *World Facts and Trends*. Macmillan, 1972.
- Mead, Margaret. *Culture and Commitment*. Natural History Press, 1970.
- Meadows, Donella, and Meadows, Dennis L., and Randers, Jorgen, and Behrens, William W., III. *The Limits to Growth*. Potomac Associates, Universe Books, 1972.
- Mesarovic, Mihajlo, and Pestel, Eduard. *Mankind at the Turning Point: The Second Report to the Club of Rome*. E. P. Dutton/Reader's Digest Press, 1974.
- Rimmer, Robert. *The Premar Experiments: A Novel about a Unique Premarital Living and Educational Program*. Crown, 1975.
- Schumacher, E. F. *Small Is Beautiful: Economics as if People Mattered*. Harper & Row, 1973.
- Schumalz, Anton B. (ed.). *Energy: Today's Choices, Tomorrow's Opportunities*. World Future Society, 1974.
- Shane, Harold G. *The Educational Significance of the Future*. Phi Delta Kappa Educational Foundation, 1973.
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